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THE COTTAGE GARDENER,

AND

COUNTRY GENTLEMAN'S COMPANION.

A JOURNAL OF HORTICULTURE, RURAL AND DOMESTIC ECONOMY, BOTANY,
AND NATURAL HISTORY.

CONDUCTED BY

GEORGE W. JOHNSON, ESQ., AND ROBERT HOGG, ESQ.

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TO OUR READERS.

EVERY seventh year is said to be an eventful year in the life of periodicals as well as of man, and our seventh year, now closed, sustains that saying born of experience. It *has* been an eventful year with us. Disasters have befallen the ship's Agents—the barque has partly changed owners—but the same crew remains, and the same hand is on the helm, with a friendly helmsman by his side to aid, to relieve, and to strengthen. A little rival craft has also been broken up, and its crew, partly drafted from us in former days, have now rejoined their former messmates, and their flag is united with our own.

We add, fearless of contradiction, that all these changes have strengthened and improved our vessel. She is more trim, sails faster and more free, keeps a better reckoning, makes more voyages, and carries out and brings home a richer cargo. This we know not only from numerous letters received from the consignees, but from the report of our purser. Once more, then, let us express our gratitude, not only to our crew and consignees, but to Him “who sits up aloft,” and may it be His will, at the end of another seven years, that our barque may still be described as “the good ship COTTAGE GARDENER, outward bound to Bonaventura, with Fruit and Poultry-ware.”

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WEEKLY CALENDAR.

D M	D W	APRIL 3—9, 1855.	WEATHER NEAR LONDON IN 1853.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock af. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in Inches.						
3	Tu	Agonum Simpsoni.	30.496—30.457	58—26	N.	—	34 a 5	33 a 6	7 a 49	16	3 27	93
4	W	Agonum rufipes.	30.527—30.384	61—28	W.	—	32	35	9 9	17	3 9	94
5	Th	Synuchus rivalis.	30.371—30.342	65—27	S.W.	—	29	37	10 29	18	2 52	95
6	F	GOOD FRIDAY.	30.441—30.308	67—28	W.	—	27	38	11 52	19	2 34	96
7	S	PRINCE LEOPOLD B. 1853.	30.392—30.344	69—33	W.	—	25	40	morn.	20	2 17	97
8	SUN	EASTER SUNDAY.	30.229—30.058	89—29	S.	—	23	41	1 10	21	1 59	98
9	M	EASTER MONDAY.	30.184—30.125	65—31	N.E.	—	20	43	2 16	22	1 42	99

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 56°, and 36°, respectively. The greatest heat, 78°, occurred on the 3rd, in 1848; and the lowest cold 21°, on the 6th, in 1851. During the period 116 days were fine, and on 83 rain fell.

At this commencement of a new volume we have to announce, that, if the proposed alteration in the Newspaper Stamp is sanctioned by Parliament, we intend adding to our contents a Summary of the general News of the week.

By so doing we hope to make THE COTTAGE GARDENER not only THE COUNTRY GENTLEMAN'S, but THE COUNTRY FAMILY'S COMPANION; and if it meets with sufficient encouragement to justify the outlay, we shall add to our number of pages, but without increasing their size or their price.

We have arranged a plan whereby we can place weekly before our readers all the chief intelligence, foreign and domestic, with the opinions upon that intelligence of the Journals most entitled to consideration. In making our selections, and in our accompanying comments, we shall be influenced by no party feeling, nor will we minister to any vitiated taste. We shall endeavour to record none but the dictates of common sense upon current events; and our readers will not need our assurance that there shall be in our Summary no disregard of the kind feeling and purity of theme which are the charms and safeguards of a British family circle.

On the 2nd of next June, within the Crystal Palace, will be held an Exhibition of Flowers and Fruits, such, we have reason to believe, as never before was placed before a British public.

Sir Joseph Paxton, in a circular addressed to those having treasures to exhibit, says:—

“The Directors trust that they will have your valuable co-operation in their endeavour to add the resources of the beautiful and important art of horticulture to the other attractive and instructive features of their collection.

“They believe that you will feel a common desire with them to make this Exhibition worthy of the Palace, and of the Art you cultivate, and secure its recurrence as a periodical source of gratification to the public.”

This appeal, we have facts before us to show, will be responded to most numerously and most efficiently. This was to be anticipated, from the certainty that the

Plants cannot be subjected to injury by exposure to the vicissitudes of our uncertain climate. They will be all under glass; there will be ample space to arrange them so as “to produce that artistic effect” which adds so much to the beauty of such exhibitions; and it requires no forecasting of “the prophetic eye of taste” to discern what can be accomplished by the justly-regulated combination of Floral beauty with works of refined art, that will then be so unstintedly associated.

Next to a consideration of the welfare of his plants, the Exhibitor is influenced by the prospect of a large assemblage to witness and applaud the successes of his skill; and the Crystal Palace will ensure this, because it secures the comfort of the visitors.

Lastly, the Exhibitor is influenced by the liberality of the prize list. He is stimulated to do his best by that liberality, not merely on account of the mere money value, but because he knows that that money value will bring into the race competitors over whom it is the superlative of honour to triumph. The liberality of the prize list is most marked; for *one thousand and fifty pounds* will be distributed on the occasion. We do not particularise the prizes, because the list can be obtained by application to the Secretary, at the Crystal Palace, Sydenham; but we point to the fact, that the first prize of £30 for Collections of Plants is equalled in liberality by the first prize of £3 for Pansies. This demonstrates that it is wished that the artisan as well as the nobleman should enter the lists.

THERE are, probably, very few POULTRY SHOWS that could be spoken of as not susceptible of improvement in some respect or other. The causes that lead to this conclusion are twofold; first, such as proceed from want of necessary funds; and secondly, errors of management. The first of these is mainly attributable to the recent undue multiplication of these Associations, and will continue till the restrictions that we have long advocated on this point are generally acted on; but the latter class embrace many details that are easier within the reach of remedial measures.

The place of Exhibition, the prize list, the arrangement of pens, and the appointment and duties of the Judges, are matters to which the attention of Committees and Managers should be especially directed. And such a recommendation is by no means to be understood as expressing any disparagement of the labours of those

gentlemen by whom those usually thankless offices have been discharged.

Let us first turn to *the place* to be selected for the Exhibition, on which so much of its success must invariably depend. Space, light, and ventilation, are here the main essentials to be attained; advantages, indeed, seldom combined to their fullest extent in any building not specially designed for the purpose. The nearest approximation however, to what is required, is usually found in the market-houses or corn-exchanges of our large towns, where Poultry Societies find their most appropriate head-quarters. Bingley Hall, we believe, is the only instance of a building erected solely for Exhibitions of this description, and its last addition has the requisite permanent fittings for poultry, independent of all other purposes. It would, no doubt, require an area of operations, and a list of subscribers hardly to be looked for in other localities, to expect a similar outlay, but the building in question is an excellent model, either for the erection of a suitable place for a Poultry Show, or the provision of an Exhibition-room for general purposes.

Tents are not to be relied upon in our most uncertain climate. Wind and rain soon penetrate even the best; and in such a case, the drenched and draggled plumage of the birds prohibit any just estimate of their comparative merit on the part of either Judges or spectators. The cold winds that prevail, even at Midsummer, are among the most adverse influences to which a fowl in such a situation can be exposed. On these accounts, therefore, however unobjectionable in fine, warm weather, exhibitors are justly apprehensive of Poultry Shows held under canvass.

We now come to *the prize-list*; and here the same argument applies that we employed in the former case. The locality that is likely to afford the best place for the Exhibition is also to be regarded as that from which good receipts are most likely to be derived. Prizes are commonly too small in their amount, and this must ever be where the competition of neighbouring Societies divides the public support. Exhibitors, as a body, it is true, are not open to the charge of seeking the mere pounds, shillings, and pence of the awards; for the credit and the ultimate increased value of their birds, when successful, are the motives which, undoubtedly, influence them as a body; but at the same time, they have a good right to expect greater liberality than is usually accorded to them. The Birmingham list of the present year is a safe guide to the classification to be adopted where every well-defined distinction of class is recognised and invited. We wish that other Societies might be enabled to carry out the same principle in their financial allotments.

In the *arrangement of pens*, the want of room in almost every case, Bingley Hall not even excepted, compels a double row of pens one after the other. This is clearly objectionable, not merely as throwing the one underneath into comparative obscurity, but also as elevating the upper tier beyond the height most convenient for inspection. Portable pens, to serve also

as those in which the birds are to be exhibited, have been suggested; but all such that we have either seen or heard of certainly fail to combine the requisite qualities of security during the journey, and of the subsequent favourable display of the birds. We might add, indeed, that unless their size is inconveniently increased, they are usually by no means comfortable abodes for the usual period of confinement. The Bingley Hall pattern, in all that appertains to the pen and its fittings, can hardly be improved upon; while the attention that is there given to the feeding department, sets a good lesson to be beneficially followed in the instance of other Societies. Quality, not quantity, it should be remembered, is required at our Poultry Shows; and, apart from other considerations, every object would be gained if the number of pens were reduced by one half, by which a single row of pens in full sight would be submitted to the public; while an increased rate of entry would swell the receipts of the Society, and keep mediocrity at home.

No more arduous task awaits the Committee, and none on which the success or failure of a Show more immediately depends, than the appointment of *Judges*. We have seen arbitrations as blameless where the duty has been confined to one person, as where two or more have been entrusted with it; and it is mainly in consideration for the individual that we advise the responsibility of the office being placed on more shoulders than one. The number of Judges necessarily depends on the number of pens; and taking the average comparative quality of the specimens, and the time allotted for the Judge's work, every 300 pens should have the attention of one set of Judges where a moiety of the day only is set apart for them; while 500 may be carefully inspected by the same number in a whole day. The winter months, in which the greater number of our meetings are held, giving less daylight, allowance may be made for the difference when summer shows are being considered, for candle-light arbitrations should be wholly prohibited. There is no censure to which Committees and Managers are more commonly open than the assignment of too short a period for the satisfactory discharge of the Judge's duties.

Whatever the number of Judges, let them be wholly unconnected with the neighbourhood; and while they are occupied at their work, let no one beyond those whose presence is absolutely necessary be present. Under no circumstances should an Exhibitor be in the room either then, or at any time after the birds have been received, and before the public are admitted. The Committee should reserve to themselves the power of officially calling upon the Judges to explain to them, though not necessarily for publication, any point in their decision which may seem to require such explanation. Such requests to be made in writing, and within a certain time, say twelve hours, from the opening of the Exhibition.

Misunderstanding has sometimes arisen regarding the remuneration of the Judges. Reimbursement of all their expenses is clearly the basis on which their

services should be asked. If, indeed, professional occupations render loss of time loss of money also, it cannot be deemed unreasonable that recompence on this account should be called for. The worst economy that can be practised in these cases, is the parsimony that selects incompetent persons on the ground of reducing the expenditure.

There are, of course, many other points, to which the attention of Poultry Societies, or, rather, their Committees, should be carefully given, but these our necessary limitations preclude our at present referring to. Fortunately, however, as example is better than precept, the Birmingham Society has given us so good a practical application both of what should be done, and of what should not be done, that a mere enumeration of the principal heads for consideration will be useful, if the enquirer turns to the proceedings of Bingley Hall for a further elucidation of his doubts.

It is intended to have a *Poultry Show at Paris*, in conjunction with the Universal Exhibition. We hear that the cost of carriage of all Poultry through France to the Show and back will be defrayed, and that the prize list will be most liberal.

PEARS FOR SMALL GARDENS.

HAVING named a few really useful Apples and Plums, I will now point to a few really useful Pears; just observing by the way, that the apparent meagreness of these lists must be accounted for by the intention with which I set out, namely, to present the unpractised amongst our readers with the names of a few on which they can rely; it will, therefore, I hope, be well understood that my lists have not the pretension of furnishing a selection for gardens of much extent. It is, indeed, particularly necessary that those whose needs are small, and with whom space is a most important object, should be placed in a position which will enable them to plant their half a score of trees with confidence.

Pears, I need scarcely urge, are general favourites. Surely, there is barely one member of society that does not occasionally enjoy a rich, mellow, and melting Pear: let us say a first-rate *Jargonelle*, in August; a good *Aston Town*, in October; or a fat *Marie Louise*, of nearly a pound weight, in the middle of November.

But Pears, above all fruits, are cultivated in such a variety of ways, that the most experienced fruit-grower, when called upon to give a solution, naturally feels puzzled in approaching the case. Now, this does not arise from ignorance of kinds, or their adaptabilities, but from a consciousness of the fact, that whatever may be the merits of certain kinds, the odds are much against their receiving that kind of treatment which they require. Not every one possesses an aspect adapted to kinds highly to be recommended; and, moreover, the difference between south and north, or a matter of some half-a-dozen degrees of latitude, is so great, that the very Pear we recommend as an ordinary standard in our southern counties, requires the treatment of a Peach in the more northern parts of Britain.

Such, then, are the difficulties which beset this case; and whilst I feel bound to point to them, I must, at the same time, observe, that after all the recommendations

which practical men give, much must ever depend on the ingenuity of the readers in making due allowance for the position.

First, then, the old *Jargonelle*; this needs no description; a standard up to the Midland Counties; but best on a wall further north; August and September. *Beurré d'Amanlis*; a most prolific and good Pear; no garden, however small, but should contain a bush of this; I scarcely know its superior, as combining profit and quality, in September and October; habits as to hardihood much as the *Jargonelle*. *Delice d'Hardenpont*; those who want a very handsome fruit, to look well and eat well, should plant one of these on an east or west wall; an October Pear. *Louise Bonne of Jersey*; let us at once say that this is indispensable, and that every garden in the kingdom must have one, at least; ripe from the middle of October to the middle of November. *Marie Louise*; invaluable as to quality, but a shy setter; those who have little room will do well to substitute the *Louise Bonne*, although by no means equal to it in the higher Pear qualities. We find the *Marie Louise* set best on an east aspect; on table trellises, however, and protected by Spruce boughs, we have had excellent crops. *Duchesse d'Angoulême* is a good November Pear, and a free bearer; would do for the gable end of a building. *Thompson's* is a first-rate Pear; does, we believe, as a standard in our southern counties, but here best on an east wall; ripe in November. *Williams' Bon Chretien*; a hardy, standard Pear, adapted to the common orchard; ripe in October; possessing a most delightful aroma; this Pear should be gathered when little more than three parts ripe, say in the early part of September, it then becomes melting. *Van Mon Leon le Clerc*; this is a highly-esteemed Pear, of immense size, and tolerably hardy, a fair bearer also; ripe through November and into December. *Althorpe Crassanne*, an excellent bearer, and will do well on rough espaliers any where south of Durham. It does not always attain a melting condition, but when it does, it is almost unequalled in melting qualities. Should be gathered before ripe. In use through November. *Beurré Diel*, an enormous bearer, and on a wall, and well exposed to the sun, of a noble appearance. Not always melting, but a famous stop-gap when Pears are scarce. It has never missed a crop with us for twenty years. *Winter Neilis*; the best Pear in this country, but requires a wall of some kind in all parts. About the Metropolis, an east or west wall. In the north of England and Scotland, a south wall. A good bearer, and in use through December. *Beurré Rance*; this is accounted the best late Pear we have at present. I must, however, confess that I have not been able to obtain it melting from east or west walls. Probably it might be better from an ordinary standard; but this we have not proved. *Ne Plus Meuris* is a great bearer, and late, but few seem to like it; its appearance certainly will not recommend it.

I hope these suggestions may still prove of service to any one planting this spring; if not, they will be found a safe guide for autumn work. I am well aware that these Pears have been recommended again and again, but we must remember, that some parties are inattentive to such things until they come to plant, and then they have not the time or the means of referring to back publications. As to stocks, I should recommend all those which do not ripen securely to be on Quince stocks, for very small gardens; for overgrown Pears are a nuisance, when coupled with barrenness. But let no one imagine they can stick in Pears on the Quince any where, and any how; they love a generous soil, and one slightly adhesive; above all things, one that is never dry and loose. I would encourage them, moreover, where the least shyness appeared, with surface-dressings occasionally, and take every means to induce

them to fibre upwards, and also to protect such fibres from drought by non-conducting bodies in the height of summer. A little half-rotten, damp, old thatch strewed over their roots in July, will prove of much service, inducing new fibres, and screening those already in existence.

To those anxious for new fruits my lists will appear meagre, no doubt; but I must again repeat, that they are for those who are not well-informed about fruits, and who have no space to squander. We have many new Pears with fine names, and a great trade is driven in them, doubtless; many, probably, of high consideration; but although our lively neighbours, the French, and John Bull, agree well about the Russian war, I am sorry to observe that they are not equally unanimous about Pears and their culture.

R. ERRINGTON.

ASHES FOR SOWING IN A WET SEASON.

THE ground was so wet at the beginning of March, from the cold, drizzly rain after the frost and snow, that even on our light soils here it was not easy or safe to work it for any of the crops; and knowing that "parched" ground is the worst of all for planting and for getting in seeds, I adopted the following method for getting over the difficulty in my own garden. Last summer I bought a hundred of second-hand sleepers from the railway people, piled them up to dry, and during the frost, having little else to do, I set about to cut them up for firewood; this, with half the quantity of coals, enabled me to have roaring fires in every room. I have been accustomed to hothouses so long, that I cannot bear the cold any more than my plants; this wood, therefore, as it happened, was about the best purchase I ever made, and the ashes and small cinders from it put me on my legs, when I had hardly a leg to stand on, for getting in my seeds in the cold, wet ground. We never had a worse season for seed, that I remember, than last March. As long as the frost lasted, I took as much care of all my ashes as I would of salt or sugar; I poured strong water over it now-and-then, and the frost fixed the ammonia in a very short time; when it thawed there was no bad smell from it, and I got it as dry as I could by turning it over, and by a covering to keep the rain from it; and as soon as some ground I had ridged was half dry, I took an equal quantity of it with the ashes, then mixed them over and over until the heap was a regular mixture. I then passed the whole through a small sieve, and of all the dressings you ever saw for covering seeds with, this was about the best. I had so much that I could afford to cover all my drill crops entirely with the mixture. I put in almost all my seeds in drills, except a few flower seeds, and they had half-an-inch put over the beds of the same useful stuff, so that the ground being wet hardly signified anything against me this season. Then, if there is anything in the doctrine which teaches that ashes retain the ammonia from strong water, and I believe there is no question on the subject, my coverings must help on my seeds considerably against the lateness of the season. I never experienced the practical value of this kind of mixture for covering seeds so much before; and I would recommend it to every one who has a garden. Wood or turf-ashes alone, or coal-ashes by itself, is not nearly so good as when the two are thus mixed together, because the coal-ashes are best for holding the ammonia, and by adding very light, pulverised soil, bulk for bulk, the heap covers double the quantity of anything, besides reducing the strength of the ammonia, so to speak, so as to be safe for the most delicate seeds.

The next best mixture would be one-half coal-ashes and the other half of burnt earth; the ashes should be quite dry

and sifted, and the strong water to be poured over them before they were mixed with the burnt earth; if all the prunings and dead wood about the grounds were burnt or charred, it would be still better. For the strong water, where there is neither horse or cow, or any dung to be had, just tell Susan to empty her slop-pail two or three times over the ashes, and then there will be no want of ammonia, and the thing may be done quietly, nobody knowing anything about it. Now, and to the end of May, there is no end to the uses for which such a heap would come in for; every seed you sow, and every plant you turn out of a pot, would soon find the use of such a gentle stimulant, and all the bedding-plants ought to have a little extra at first, to assist against the great change from the pot to the open ground. China Asters, Zinnias, and all Verbenas and Petunias, with many others, are particularly fond of some light, rich compost about their roots at the first starting off; the want of it at that critical time is the cause why so many hang down their heads, or remain stationary for a long while at first turning out. Depend upon it, such timely helps are among the grand secrets in gardening. It is not science, and all that sort of thing, which is so much needed, as plain, common sense, in a homely way, which any one may prove for himself in one season, and at very little cost.

STRIKING CUTTINGS.

There is a new application for striking cuttings just come into play, by a gentleman of Surbiton, W. Walton, Esq., and not more than a gun-shot from my door, which application, if I am not mistaken, is destined to do as much for amateurs in that line as THE COTTAGE GARDENER himself.

Our great Rose-grower here is the author of the invention; he has the apparatus in full work now, raising seeds and striking cuttings. I have been to see it several times, and I never saw such a handy way of striking cuttings before. The apparatus, like the Wardian case, may be made to match the furniture of a drawing-room, and be as good for striking cuttings, or for raising seedlings, *in the drawing-room*, as safely and expeditiously as by a tank hotbed, and by only a tenth of the expense. I intended to have had a drawing of the apparatus ready for THE COTTAGE GARDENER this week, but on seeing the original sketch, there were some slight improvements which occurred to me, to which the gentleman assented, and another apparatus is now in the hands of a skilful mechanic, who will set it up in his own shop the moment it is ready. As soon as we shall ascertain the exact power of the thing, the cost of make, and the cost of working at Surbiton, I shall draw up a report of it, and we shall give an engraving to explain the working of it. Meantime, my object is like that of Sir Benjamin Hall, when he first announced his new Board of Health bill—to advise parties, who may have similar projects in contemplation, not to incur much expense on them, until they see how far *our bill*, or propagating apparatus, will suit them instead. The original is placed against the back-wall of a new greenhouse, at the end of the cross passage, and the appearance, from a front view, is much like that of a writing-desk, the sloping face of the desk being of glass, all the rest that one can see is of wood. Now, raise the glass-lid of the desk, and, instead of "bills and papers," you have pots of cuttings, and seedling pots, in different stages, standing along the bottom, on silver sand, the whole as clean and sweet as a new pin, the thermometer at 85°, a dew on the inside of the glass, the sand is a little damp, and the bottom of the pots, from the heat of the sand, may be about 90°; but as the pots are merely *placed* on the sand, not plunged, we may, for all practical purposes, imply that the top and bottom-

heat by this apparatus are one and the same degree. The exact principle on which the bottom-heat is applied has never been in use for gardening purposes, as far as I am read in the mysteries of the craft. It is on the tank system, however, but the principle of the circulation of hot-water is departed from. There is a tin-box of hot-water, about six inches deep, resting on supports, so as to raise it four inches from the very bottom of the box, or bottom of the drawer in a writing-desk; there is a little space about one-and-a-half inch between the hot box and the wooden-case, all round, and that space is rammed with dry sawdust, at present, but pounded charcoal will be the best non-conductor of heat; then an inch of white sand is put over the hot box and sawdust, and that part is complete. But how the heat is got, where from, or how applied, is yet a mystery; there is nothing visible to indicate anything of the kind; but open a small slide in the front, and you see the bottom of the hot box standing up four inches from the bottom of the case, as I have just said; a small tin-funnel, turned upside down, is attached to the bottom of the hot box, about the centre of it, and a small lamp just under the funnel, the flame of which is swallowed up as fast as it comes, but where it goes to is a second mystery; it heats the water in the box, however, to 80° or 90°, at a cost of twopence for the four-and-twenty hours; when placed in a greenhouse, less or more would be needed, according as the apparatus was placed in a warmer or cooler place; but all the details will be given soon with an engraving.

BANK GROVE.

I was anxious to see the effects of such a long-continuous hard frost on half-hardy plants, particularly on our more recent importations from milder climates than our own; and the only place round here which I know of, where I could see this to the best advantage, is Bank Grove, near Kingston, the beautiful seat of W. Byam Martin, Esq., to whom I am indebted for a "standing order" to see his whole collection, inside and out, whenever or as often as I like to call. They were making great alterations and improvements at Bank Grove since I was last there in the summer of 1853. The kitchen-garden has been removed to the farthest side of the flower-garden, and a new Pinetum is now planted on the site of it; new hothouses have been erected, and many other improvements. When all this was going on, it was not very proper for an idler to bother them with formal visits, so I never called till the whole coast was clear again. I found the huge plant of *Camellia reticulata* very much improved in size and shape; it was once accompanied with two other large plants of Camellias in the same bed; when these were removed, the *reticulata* was not so well balanced as a specimen plant of the present day is required to be; but Mr. Henderson, the active manager, has remedied all this by a judicious system of training, so that the plant is all but perfect in shape, and that it will bring 6000 blossoms, of the largest size, to perfection this very month, as was stated last week, is, of itself, a proof of its high and healthy condition. Whoever sees this plant next week, or the week after, will certainly see the finest specimen of the art of gardening now in existence. I have had as good opportunities of knowing the state of our craft all over the world as any man living, and I do not hesitate to say, that this specimen of *Camellia reticulata*, as it now stands, is the most luxuriantly-beautiful specimen on the face of the whole earth. The worthy gentleman who sent it first over to England, John Reeves, Esq., is still hale and hearty, and is as fond of plants and flowers as any of us. I hope he will be able to come and see it this season when it is in bloom. This *reticulata* is considerably

later than others of the old Camellias under the same influences; there is a large plant of *Althæaflora* trained against a wall behind *reticulata*, which had 257 blooms open when I called in the middle of March, and all over the establishment most of the Camellias were in full bloom; the most conspicuous of which were noted as follows: the best reds were *Imbricata*, *Werleyanum*, *Ohiensis*, *Marchioness of Exeter*, *Venere* (fine form), *Conspicua*, and *Lady Grafton*. Light rose-coloured were *Prattii*, *Byasanthus* (very good), *Queen of England*, and *Hendersonii*. Dark rose, *Frederic le Grand* (fine), *Hampsteadii*, and *Celestina*. White, *Fimbriata* (the best), *Old Double White* (next best), and *Ochroleuca*. Striped and mottled, *Duchess of Northumberland*, *Duchess of Orleans*, *Colvillii*, *Queen Victoria*, *Albertus*, *Gillesii*, *Triumphans*, *Doncklaari*, and *Tricolor*.

The following are growing against the back wall of the conservatory in slate tubs; they look as strong and healthy, and as full of bloom as the above, which are large bushes planted out in the bed of the conservatory; *Imbricata*, *Lady Hume's Blush*, some of the flowers of which are as regularly hexangular (the flower six-quartered as it were,) as if they were so stamped. I recollect the time when *Camellia hexangularis*, known to us only by Chinese drawings, was as much a puzzle as the philosopher's stone; at the same time we had it in abundance, *Lady Hume's Blush* being the true *Hexangularis*; but it must be in the highest state of health to show the angles distinctly; here, it is in the bed that it is best angled. *Monarch* is the next strongest, both in the bed and in the slate boxes, after *reticulata*. *Chandlerii* is so very healthy in slate tubs, that it has lost the original variegation altogether, and now looks like *Coralina*. There is one plant of it in the conservatory, next the door into the drawing-room, with the most shining leaves of all the leaves in the world; the highest French polish could not *glisten* them so much. *Sweetii*, *Woodsii*, and *Frankfortensis*, are also in these slate tubs. I mention the tubs particularly, because there was a foolish prejudice against slate tubs till very recently; but glass pots, china and zinc vases, and all kinds of hardware goods, will grow plants quite as well as the softest garden-pot, when one knows how to treat them in a proper manner. *Woodsii*, like the *La Reine Rose*, never opens its immense buds with some people; but here, a plant of it as big as an ordinary Portugal Laurel opens them freely. One large plant of *Fimbriata*, in the bed of the conservatory, could not have less than 700 open flowers on the day I called. *Elegans*, which ought to be numbered with the best Rose kinds, has the largest flower of all, except *reticulata*. One particular plant of *Doncklaari* was the richest thing, in its way, I ever saw; there might be from 300 to 400 blossoms open, and there were hardly three of them exactly alike in size, or in the ground colour, or in the way that they were blotched. You might pick a dozen flowers off this plant, and pass them off as twelve new Camellias to Mr. Chandler himself.

In the Azalea house, which joins that which is occupied by *reticulata*, are the following Camellias, also in slate-tubs; and I should say they would be in good bloom by the same time as *reticulata*, so that visitors may judge how far I am right in my estimate of the plants in the conservatory — *Doncklaari*, *Chandleri*, *Bealii*, *Florida*, *Fimbriata*, and *Elegans*. Just ask to have *Bealii* pointed out to you, and see if your eyes can stand the dazzle of it in the sun. It was the best of the highest-coloured ones in the conservatory; the following were, in their ways, almost as good, *King*, *Coralina*, *Elegans*, *Lombardii*, *Incomparabilis* (single), *Carswelliana*, *Rosa sinensis*, and *Eximæa*. The old double-striped, with *Lady Grafton*, *Colletii*, *Henri Favre*, *Laudrethii*, and some others, were the most conspicuous of those in pots. The front stage of the conservatory was loaded with

forced and spring plants in bloom, such as *Chinese Primulas*, *Epacris*, *Narcissus*, *Hyacinths*, *early Tulips*, *Cinerarias*, *Coronillas*, *Cytisus*, and many others, among which was an excellent Azalea, called Waterer's *Vitata rosea*; the colours were straw, rose, and white stripes. Mr. Henderson told me this was the best forcing one he knew, as it required very little heat to bring it on thus early.

There are two houses entirely for Chinese Azaleas, except that Camellias are grown against the back wall of one of them—the regular Azalea house; the irregular house, if I may so call it, stretches along the back of the regular, and with a dead north or north-east aspect; the large specimen plants in this north house will not show a single bloom till all those in the regular house have done blooming; thus, without forcing, these Azaleas will be had in bloom till late in June; so that by a system of forcing, this one tribe could be had in bloom every day from November till June or July. They and all the Camellias require only one half the fuel that bedding Geraniums require to keep them in good condition.

I do not know a single individual among our highest nobility who indulges one half so freely in the luxury of these Camellias and Azaleas as Mr. Byam Martin, and he is the only gentleman that I know of, in the three kingdoms, who is growing pot Vines on the right principle, and that principle is, that they should pay for their keep. It is all very well to fill the heads of young amateurs with the notion that Vines can be grown in pots to pay their cost, or to tell a city prince that nothing pays better than farming, if he would but try; but all that is moonshine to an old gardener like me, who knows very well that no man ever yet succeeded in growing Vines in pots at less cost than he could buy them in the market, or grow them up against the rafters. I told, in my autobiography, who first introduced the right way of growing pot-vines—Mr. Niven, now of Dublin, and here the plan is improved on, according to the improvements of the age. The Vines are from eyes one season, and trained up where there is room for them, and in November they are turned out of the pots, the balls plunged in good melon-soil, enriched over a tank-bed, and the rods are trained over trellis, just like so many Cucumbers; when the crop is over, the Vines are rooted out and thrown away to make room for Melons, or Cucumbers, or both, and the pit to be ready by the following November for a fresh lot of plants. Once you get them “on their legs” on this plan, there is no more work or bother with them than would be with Vines against a cottage wall. I would recommend this as the best plan for the earliest crop to all those who want Grapes every day in the year, and to others who can grow Vines in one year so as to be in a condition to fruit the next season. The great art is in growing, not in putting the Vines in pots. There are two varieties of Egyptian, or Indian, Grapes, which will fruit here this season, on this plan, for the first time in England—the *Hubshee*, a plum, or copper-coloured Grape, and the *Abee*, or *Able*, a white kind. Do any of our readers know these Grapes in their native places?

There is a newly-built pit, east and west, with a back passage inside, over which are two shelves against the back wall; the top shelf was filled with *Black Prince* Strawberries, in fruit, and the lower shelf with two or three early kinds of Kidney Beans in pots, and all in the highest health and bearing. The *Early Six Weeks Bean* were fairly tried against *Fulmer's Early*, and the experiment has proved the rascality of some one, for the “Six Weeks” is nearly so many weeks behind the older kind. Would that we had brass pens, to write down that kind of deception which killed our brave soldiers, and which tries to cheat us with false names and colours at home. The *Early Six Weeks Bean* is not worth forcing at all as compared with *Fulmer's Early Bean*. There is another

parallel range of large pits, or narrow Dutch houses, and both are chambered and heated with hot-water pipes with a close covering of slate over them; the front range is devoted to the fruiting of Grapes, and for growing Melons and Cucumbers, but with a division between; and the back range is now filled with an immense quantity of bedding-plants, all potted off some time since. *Unique*, *Cerise*, and *Lady Middleton* Geraniums seem to be great favourites, also the new variegated ones; and some of the *Tom Thumbs* are bigger than Barnum himself. At the farthest end of this division are a number of Cherry-trees in full bloom, (middle of March,) with the same heat as the bedders, and on the back shelves were succession pots of Strawberries; from this you enter by a division-door into a regular orchard-house, or rather such a crop in pots, for this division is as substantially built as the others. The Peaches and Nectarines were just setting with a fair “show;” the *Etruge* Nectarine being the best promising. The back shelves were full of Strawberries coming on.

The early Vinery was very promising; but in the pit will be the earliest Grapes. Mr. Henderson told me, that he would thin the *Cannon Hall* Grape in the bud, before the flower-buds opened, and that he would dust them with other pollen as they were open; if he thus succeeds in setting them, he will have the best *Cannon Hall Muscats* in the county of Surrey this season.

But the object of my visit was to see the effect of the frost out-of-doors, and I am glad to say, that notwithstanding the large assortments of the finest Rhododendrons, Pines, Cypressess, and all that class of plants, they have hardly lost a leaf. The *Cephalotaxi* appear as hardy as old Yew, they are in that style; but of a much better green the common Yew; there is not a brown leaf on them. *Taxodium sempervirens*, twenty feet high, is nearly as green as it was last October; yet it seems the most touchy of all our new trees. Here they are hardly a hundred yards from the Thames, and not many feet above tide mark. The *Funebral Cypress* escaped entirely; some plants of it here are four feet high, and bushy from the grass, and not a leaf has been browned. *Skinneria Japonica* looks like a young *Pontic Rhododendron*, and seems as hardy; two plants of it were then coming into bloom like a *Daphne*, but it is in the scarlet berries, in winter, that the value of this low evergreen is more conspicuous. *Libocedrus chilensis*, now about four feet high, and “well clothed,” has not a leaf browned, but one short branch near the top is killed, by some accident, not by the frost. This will make a noble evergreen some day. *Fitzroya patagonica*, six feet high, is browned in the leaves, but the wood is not hurt. *Cupressus thurifera elegans*, “the handsomest of the tribe,” is also a little browned in the leaves, as are also those of *Picea nobilis*, and those are all that I could see the least touched of all the Conifers here, and the most of them are at that particular stage of size and growth which is most susceptible of hurt by frost. Witness the following list—*Abies morinda*, ten feet. *Douglasii*, thirty-six feet. *Thuja compacta*, *aurea*, and *pendula*, all about four feet. *Wareana*, nine feet. *Cupressus macrocarpa* alias *Lambertiana*, fourteen feet. *C. goveniana*, nearly the same. *Juniperus Chinensis*, fourteen feet. *Pinus excelsa*, ten feet. *Insignis*, from ten to twenty-four feet. *Macrocarpa*, eighteen feet. *Montezuma*, *Llareana*, *Sabiniana*, *Monticola*, *Halepensis*, all under ten feet, and not the least touched; but *Pinus muricata*, and *Ayacahuite*, are slightly browned. *Cryptomeria Japonica*, from eight to fifteen feet, all untouched in the least. Indeed, there were no trees or shrubs hurt by the frost here, except a few of the best hybrid Rhododendrons, and that was from the sun one or two days. The best of the new Sikkim Rhododendrons passed the winter here with impunity. I handled a plant of *Ciliaris* nearly a yard

high, and out as a specimen plant on the grass, with no protection near, and I could not discover a speck on it from the frost. *Niveum*, *Thomsonii*, and *Falconerii*, under the same conditions, and equally safe. Here, then, is a tale to go to market with. The Nurseries are loaded with such rare things which are as hardy as Junipers. One point, however, should be attended to in their cultivation, and that is, to ripen them as much as possible before the cold weather comes on in the autumn, for we must bear in mind, that the hot summer of 1854 was the real cause of saving so many of our best new plants from the severe frost which followed.

What are the ways for ripening such plants, and how to apply them in wet and mild autumns, are questions not yet quite settled among gardeners, or if they were, the explanations would take me out of my depth to-day.

D. BEATON.

LITTLE MATTERS.

STOVES INSIDE OF GREENHOUSES.

THERE have been endless enquiries as to which stove, Joyce's, Arnott's, &c., is the best for this purpose, and our reply must honestly be, "bad is the best." No doubt, many combinations of these might be valuable in winter, in cool greenhouses, and in cold pits, where the great object is to exclude much amount of frost, and to preserve the plants in life rather than to grow them; but each and every of them are dangerous when placed among growing plants, whether provided with a flue, as most of them, or guaranteed to give off no carbonic acid or other gases; when, instead of a flue, they are provided with peculiarly prepared fuel, which must be purchased to burn in them. The latter might not be quite so dangerous in a closed room as a good-sized brazier of common charcoal, but our experience would lead us to say, that the danger would only be a little mitigated; and I did try a good many experiments with these flueless stoves years ago. However useful the common iron-stove, with its attendant iron-pipe flue, may be in keeping out frost in winter, when the plants are kept nearly in a torpid state, they are dangerous utensils when a brisk heat is wanted; first, because, if the stove itself gets very hot, the fumes and gases thrown off will be prejudicial; and, secondly, however securely the joints of the smoke-pipe be luted, there is always the danger of back draughts escaping from some cranny, or from the feeding-place, into the house. I have known instances in which the hopes of the season were next to totally blighted from this cause alone. Even with a fairish brick smoke-flue, I have known an escape of gases through its chinks, when the fires were strong, destroy all such tender things as French Beans, in early spring, in a few minutes. Hence, then, as a general rule, however much your furnace, or boiler, or stove be inside the house, so as to secure all the heat possible, I decidedly recommend that the feeding-place for giving fresh fuel, and removing ashes, &c., should be outside the house; and that if an iron-pipe is used as a flue in the house the joints should be carefully luted.

IRON PIPES AS FLUES.

It will be observed that in all stoves where small iron-pipes are used for conveying away the smoke from such stoves in living rooms, offices, churches, &c., a peculiar kind of fuel, making but little smoke, such as coke, cinders, &c., is generally used. Such small pipes would not answer if common smoky coals were used, if the pipes traversed any distance, as after proceeding as far from the furnace as to permit by the comparative coolness for the deposition of soot, that

would soon become so thick and firm as to prevent the draught, while it would be removed with great difficulty. Several, well aware of the heat-conducting powers of iron, have proposed the using of iron-pipes in small houses, for diffusing the heat from a common furnace, in preference to brick-flues; but in every case I know of, where pipes less than six or eight inches in diameter were used, and had to traverse a considerable distance, the draught was apt to be stopped by a firm deposition of soot, that was removed with difficulty, more especially when, as in the case of a flue, these pipes were placed nearly horizontally on a level, before they rose so as to form a chimney. Another argument against them is, that if strong fires were used, a space next the furnace was apt to become too hot; and the air near was apt to be scorched and vitiated in consequence. This was partly remedied by surrounding such part with rubble and sand. When the pipes were placed considerably inclined upwards instead of horizontally, the soot did not encrust so much. Considering, however, that economy, generally, demands that furnaces for greenhouses should burn up all sorts of rubbish and refuse, this should be thought of before fixing upon an iron-pipe as the medium for conveying heat inside, as experience would seem to say, either that you must have the best, and the least smoky fuel, or that you must have a pipe large in size.

GLAZED EARTHENWARE PIPES FOR WATER, AND AS FLUES.

Since the communication from Edinburgh, page 478, I have had several enquiries, first, as to the fitness of such pipes, three or four inches in diameter, for conveying hot-water, instead of iron. If placed horizontally on a level, I do not see why they should not answer; but there would always be a danger of a pressure at the joints causing them to leak; and thus, even on the score of economy, they would ultimately be more expensive than good iron pipes, while all danger from such accidents as fractures would be avoided. The second enquiry has reference to such pipes soon getting clogged with soot, like an iron pipe. Of this I cannot practically speak, having never tried them. No doubt, our Edinburgh correspondent will make that all clear. In the meantime, I may mention that one able gardener does not think that there will be any deposition in small houses, however rubbishy and smoky the fuel, owing to the inside being glazed, and the power of draft in such a circular medium. Another celebrated gardener tells me, that he has known such glazed pipes used as chimnies in greenhouses, and the draft was so great that the damper had always to be more or less used, to prevent the fire burning out too quickly. If such strong glazed pipes be thus proved so efficient as a flue in a small greenhouse, it will be a considerable advantage to amateurs with small houses, except in continued severe weather in winter. A sudden heat, to meet a sudden frost, is what these houses chiefly require, and that heat to be communicated as economically as possible. True, with a small boiler, and three-inch pipe, the house may be quickly heated; but however nice the boiler, more heat will march up the chimney than if there was a longish flue for the smoke and heat to traverse. A strong-built flue, were it brick on bed, would be no disadvantage in a hothouse constantly at work, because the fire would be little out; and once such a mass is heated, it is maintained more easily at a regular temperature than by a flue built with bricks on edge, and covered with a thin tile. The latter are best fitted for greenhouses, because they heat quickly and cool quickly; but these, however neatly put together, could not rival, in this respect, these round earthenware pipes. I place much dependance upon what is stated to me of the quickness

and strength of draft in such circumstances; and hope that some will put them to the test, and report progress. I have frequently urged upon hot-water tradesmen the making and advertising a small boiler, with pipes, easily put up and fixed, so as to heat small greenhouses, say twenty feet by twelve, or less; but if such a matter is so unworthy of their notice, that there is great difficulty in getting small structures heated by such a mode, except at such an expense as terrifies a person from attempting it—flues and glazed pipes, and other modes, must of necessity be resorted to. Of course, all who have seen these strong hard-burned pipes lying about in towns where sanitary improvements in the shape of drainage are being effected, will be well aware that they are altogether a different affair from the red pipes manufactured at Potteries and mere land-drainage establishments.

HEATING AND AIRING GREENHOUSES.

As April will appear before this reaches the reader, such a jotting as the above is nearly out of place, especially after the attention given to the matter in previous volumes; the season having arrived when artificial heat will be next to totally unnecessary. Provided there is a sharpish frost at night, if the previous afternoon was sunny, and the air taken away, say by three o'clock, if the clear atmosphere denoted a coming frost, and again the sky was clear in the morning—speaking of early and bright sunshine—there might be no occasion for a fire at all, if the thermometer inside kept at several degrees distance from the freezing point, as the sun would soon raise the house sufficiently. Writing this on the 26th, the day is bright with sunshine; but still the air is cold, as might be expected after the sharp frost of the preceding night. Now, in such circumstances, just as much air as will keep the house sweet and comfortable is far preferable to abundance or air, cold and dry, which thus robs the juices from plants in a way little dreamed about. Many amateurs are quite well aware of this in the colder and darker months of the year, but they forget to apply it in the spring, when it is almost of as much importance. For instance, and I am not speaking at random, a young gardener, on going to bed, finds the thermometer approaching the freezing point, with a starry sky above him, and takes precautions accordingly. On getting out before six in the morning he finds the mercury six or eight degrees below the freezing point, and the walks as firm as iron; while inside the house the glass stands at 38°. He does not stay to feel his pipes or flue; but knowing that the cold is generally the most intense for a few minutes before and after sunrise, he is so afraid for the house getting a degree lower, that the fire is set a roaring, and, perhaps, replenished half-an-hour afterwards, so that want of heat shall be no excuse for failure. Before he goes to breakfast, the pipes, or flues, have become so warm, and the sun striking the glass with considerable force, he is obliged to give air to moderate the heat. It is amazing how the temperature mounts when fire-heat and sun-heat thus meet, and, therefore, abundance of air is given top and bottom, to prevent a cool circulation; and then a mass of enquiries, or cogitations, are put in the memorandum book, as to the *reason* why the edges of tender leaves get crimped, as with a ladies' Italian iron; and how others flag, though well supplied with water, and do not recover until the house is shut up for the night. So much is written in the praise of abundance of air, that that air, however cold and dry, though the sun be shining, is never accused as the real rogue that he is. In such bright days, after keen, frosty nights, the airing should be given moderately, and chiefly at the top of the house; and to insure this moderate opening of the sashes, it will be necessary that a bright sun should not act on

the house in unison with a high temperature in the pipes or flues. The sun itself will not raise the house so quickly; and the heat from the sun being attended by its light will not injure the plants, though the temperature of the house be a few degrees higher than usual. In such a case as we have supposed, a small, brisk fire, just to prevent the temperature of the house sinking lower, before the sun began to play upon it, between seven and eight o'clock, would be all that was necessary. If from the clear sky, and there being still a little heat in the pipes, you could calculate that the house would scarcely sink any more before the sun told upon it, it would be wiser to give no firing at all in the morning, and thus you would not be compelled to give so much cold air. The same rule applies to forcing-houses; and, therefore, economy in fuel, the health of the plants, and ultimate success, are often promoted by the fireman just getting into the habit of consulting outside and inside thermometers, and scanning the appearance of the heavens, before he pitches fuel into a furnace, merely because it is a little cold, or he has been in the habit of doing so. In sunny weather, unless in very cold nights, fires will *now* be unnecessary, as by shutting up early in the afternoon, a good amount of sun-heat can be secured to act in reserve during the night. The more cubic feet of atmospheric air a house contains from the glass to the ground, the more effectual this will be. The heat thus accumulated in shallow houses and pits is soon dissipated, unless some protection is used.

HEATED WATER FOR WATERINGS.

During the winter and spring months all plants that you wish to grow freely should be supplied with water a few degrees warmer than the atmosphere in which they are growing. Many bedding plants that about this season must get rather rough treatment, by being transferred to borders, with modes of protection, for a time more or less suitable, greatly depend upon this warm water for surmounting the hardships to which they are unavoidably exposed. I have several times been told how clever our French sisters manage these warm waterings, for promoting and accelerating vegetation. Plants otherwise treated alike, but differently as respects being treated with cold water, and with water about 60°, soon manifest a striking disparity. There is one favourite group that should have no chilled water after April; namely, Calceolarias; and the less artificial heat of any kind, the more healthy they will be. Fire-heat, and want of plenty of air, even though cool, but above freezing, are the great inciters of green fly on these beauties.

TIME FOR WATERING.

As a general rule, plants in pots should be watered during the forenoon from October to June; from the middle of June to October, the afternoon or the evening will be the best. If watered late, when the weather is cold, the temperature of the soil is apt to become very low from evaporation, which always cuts the body that loses the moisture. Were plants watered in the morning in the dog-days, the moisture would be so rapidly evaporated, that the plant would derive little benefit from it, and very frequent drenchings deprive the soil of its nourishing properties. When the waterings are given at night the plant has plenty of time to take its full allowance at its leisure, and the soil and roots are fully surcharged, ready to meet the demands of the sun of the following morning. Insects in abundance, and a sickly growth, are not unfrequently the consequence of plants standing dry at night in summer, and the sun beating on them fiercely next morning, while in this debilitated state. On the other hand, in cold weather,

in winter, plants that are growing in wet soil at night have suffered, while those comparatively dry have escaped.
R. FISH.

HARDY FERNS.

(Continued from Vol. XIII., page 434.)

LASTRÆA.

A GENUS of Ferns established by that clever botanist Presl, out of *Aspidium* and *Nephrodium*, and the justice of his selection is now so universally acknowledged that few cultivators object to it. The name in most catalogues is now adopted, and I advise all the readers of THE COTTAGE GARDENER to change their labels (if not already done), for this name. The grand characteristics of the genus consist in forked, or pinnate, free veins on the leaves, and kidney-shaped covers on the seed-vessels. These, combined with the peculiar habit of the species, constitute the generic character.

LASTRÆA CRISTATA (CRESTED).

A British Fern, growing two feet high. Native also of various parts of Europe, and also of North America; very hardy and deciduous. Fronds pinnate, lance-shaped; pinnæ distant, deeply-cut and heart-shaped at the base. Seed-vessels placed in rows, on each side of the mid-rib, midway from the margin. Stem scaly; scales broad. Root-stock slowly creeping. Increased by division. A free-growing species in almost any situation, and well worthy of general cultivation.

LASTRÆA DILATATA (ENLARGED-CRESTED).

This handsome Fern decorates the hedge-banks of many a pleasant country lane in Britain. I have found it plentifully in shady lanes about Macclesfield, in Cheshire; a part of England rich in Ferns. In one particular lane I counted ten species of these pleasing plants in twenty yards. Fronds, in favourable spots, fully three feet long, dark green, oval lance-shaped, bipinnate, and graceful, bending in arch-like manner. Leaves pinnate, with thorny lobes. Seed-vessels mediate, that is, in rows at equal distances from the mid-rib and the margin. Seed-vessel covers fringed. Stems very scaly and dark-coloured in the centre. Increased by dividing the slow-creeping root-stock.

LASTRÆA DECURRENS (DECURRENT).

It is seldom that we have to record a Fern from that distant country China. This is one better known as *Polypodium decursive-pinnatum*. Mr. John Smith, of Kew, had very correctly placed it in this genus, under this appropriate specific name. It is somewhat tender, but will live in the open air if covered with leaves during severe frost. Fronds a foot high, rather drooping, lance-shaped, and pinnate, light, beautiful green; pinnæ without stalks, sinuated and decurrent, winging the leaf-stem. Seed-vessels at the end of each vein. Stem covered with chaffy scales. Increased by dividing the tufted rhizomas. This Fern forces beautifully. I have it now, March 24th, with beautiful, light green fronds, six inches high, growing circularly round the root-stock, forming a kind of hollow like a bird's nest.

LASTRÆA FELIX-MAS (MALE FERN).

This Fern is the most common of any, excepting the common Brake, throughout Britain and all the four quarters of the globe. It will grow in almost any soil and situation, but thrives best in shady, moist woods. I have seen it in Ireland in such a situation, five feet

high, forming quite a bush. Fronds bipinnate; pinnæ narrow and lance-shaped, deeply cut at the edges. Seed-vessels mediate.

LASTRÆA FELIX-MAS CRISTATA.

This is a most beautiful variety, with the ends of each frond and pinnæ most beautifully tasselled. It was originally found wild in Cornwall, and has been kept by division ever since in cultivation. I consider it one of the most beautiful and elegant of all hardy Ferns in cultivation.

LASTRÆA GOLDIANA (GOLDIN'S).

This handsome, scarce Fern is a North American one. I have only seen two plants of it, one in the Glasnevin Botanic Garden, Dublin, and the other in the Botanic Garden at Birmingham. Fronds two feet high, broadly lance-shaped, half of the frond twice-cut, the other half of the frond pinnate; pinnæ broad lance-shaped, deeply cut, and serrate at the margin. Stems scaly. This is a very handsome, noble Fern, but slow to increase. A young plant is sometimes produced on one side of the root-stock, and as soon as it has roots belonging to it, it may be carefully divided off, potted, and kept in a cold frame for a few weeks, until it is established.

LASTRÆA MARGINALIS (MARGINED).

This is also a North American hardy Fern, and is very handsome, growing two feet high. Fronds bipinnate throughout, lance-shaped, and a peculiar colour, greyish-green, with a shade of blue, when seen in strong sunshine; pinnæ sharp pointed and oblong; leaves oval, blunt-ended, the largest next to the stem, and notched on the edge. Stem chaffy. Seed-vessels placed on the margin. Root-stock tufted and very large. This rare Fern is very slow to increase except by seed.

LASTRÆA NOVEBARACENSIS (NEW YORK).

As its name imports, this Fern is from North America, growing about a foot high. Fronds very slender, covered with short hairs, lance-shaped, and pinnated; pinnæ lance-shaped, without stems, deeply divided; leaves narrow. Seed-vessels mediate. Root-stock creeping. Easily increased by division; hence, this pretty, dwarf Fern is by no means rare.

LASTRÆA OREOPTERIS (MOUNTAIN FERN).

A pretty British species, with an agreeable perfume. Fronds two feet high, pinnate, and the pinnæ beautifully divided into oblong flat segments. Seed-vessels near the margin. Stem short and chaffy. Rootstock tufted; hence it is slow of increase. This is one of our handsomest Ferns, and is found pretty plentiful in high situations, on the shady sides of hills.

LASTRÆA RECURVA (BENT-BACK).

Mr. Watson names this *Lastrea feniseeii*; it is generally known by Mr. Newman's name, *recurva*. It is a native of this country, and is a neat, compact, ever-green, hardy Fern. I have several plants of it that have been fully exposed in pots unplunged during this last hard winter, and the leaves, or fronds, are now quite fresh and green. Fronds triangular, tripinnate, a foot high, and of a lively green. Examined with a good magnifier, the underside will be seen covered with glands. Leaves oblong, curved upwards, with spiny divisions. Seed-vessels mediate; stems and ribs of the leaves covered with narrow scales. Root-stock tufted; hence it is slow of increase; but old, large plants have many heads, or tufts, and by dividing these a plant may be made into several.

LASTRÆA SPINULOSUM (CRESTED PRICKLY).

A common, British species, ornamenting many a woodland lane with its yellow-green fronds, growing in favourable situations three feet high. Fronds bipinnate, narrow, lance-shaped, growing erect; leaves oblong, deeply cut, and spiny. Seed-vessels mediate, with entire covers; stems covered with light-coloured broad scales. Root-stock tufted, slow to increase; but that is of little consequence, for it is plentiful enough in almost every part of Britain.

LASTRÆA THALYPTERIS (LADY FERN).

Another Fern common in Britain, and in the four quarters of the world. The only Fern in this genus that has barren and fertile fronds. Fertile fronds erect, contracted, growing a foot or more high, pinnate. Barren fronds pinnate, shorter than the other; seed-vessels mediate. Root-stock creeping; hence, the species is easily increased by division.

LASTRÆA ULIGINOSUM (MOOR FERN).

A strong-growing Fern, native of Britain, said to be only a variety of *L. cristata*. Mr. Newman, however, thinks it quite distinct. Fronds two feet high, bipinnate at the base, pinnate on the upper part; pinnae triangular, deeply cut; stems scaly. Root-stock creeping. Increased by division.

T. APPELBY.

(To be continued.)

LUCULIA GRATISSIMA.

(THE MOST WELCOME LUCULIA.)

THIS fine plant is not half so well known, nor a tenth part so much grown, as it deserves. Its merits are so great, its flowers so beautiful, and its leaves so fine, that I am tempted to devote a paper to its culture, and thereby to recommend it to a more general distribution amongst the lovers of fine-flowering, sweet-scented plants. In the autumn, I saw a fine specimen growing in the garden of the Horticultural Society at Chiswick; and only last week I witnessed another equally fine plant in the gardens belonging to the Earl of Derby, at Knowesly Park, near Liverpool. Both these plants are planted out in the border of the conservatory at each place, and both, no doubt, have been seen and admired, when in bloom, by many visitors. No doubt there are in many other places good specimens of this charming plant; but if there are, I have never noticed nor seen them.

The plant may be described as a woody shrub, with large, handsome, laurel-like leaves, but not so stout, and when in health of a most pleasing bright green. The flowers are produced at the ends of the shoots most profusely in cymes, much in the same manner as the single *Hydrangea Japonica*, or a *Laurustinus* immensely magnified. Each flower is larger than a sixpence,—of a delicate blush suffused with pink, and has a most agreeable perfume. The blooms last about a month or six weeks,—the first bloom appears about September, and others continue opening till near Christmas. This description, which is, I believe, truly correct, proves my first assertion, that it is a most worthy plant. Unfortunately, it is not so easy to grow as a Myrtle under ordinary treatment, but requires a peculiar one, which, if rightly understood and practised, will be successful. This peculiar treatment I will endeavour to describe.

CULTURE.—The first difficulty is to obtain the right sort of plant to begin with. A small, young, soft-wooded plant is almost sure to perish, because it has been grown in close, moist heat; and the moment it is

taken out of its warm, moist quarters in the nursery, the evaporation of juices in the air during its transit injures it so much that it hardly ever recovers it; therefore, whoever orders a plant should give particular directions that its stem, at least, should be well hardened and woody, and the plant before it is packed off should be placed in a cool, dry stove, for at least a month before it leaves the nursery, and the time to send it should be during the warm weather of the latter end of June. These instructions having been complied with, and the plant well packed with a double case of brown paper over and around it, the plant will travel safely by railway for hundreds of miles. When it arrives at its journey's end, and is carefully unpacked, place it in a warm stove for a fortnight or three weeks, and give it daily a dewing of tepid water, with proper supplies at the root. It will then have recovered the effects of the journey, and may at once be repotted. The proper compost for it is fibrous peat and loam in equal parts, with a liberal addition of rough silver sand, and small pieces of charcoal, distributed throughout the whole to keep it open. Choose a clean pot, three sizes larger than the one it is in, and drain it well, for it is very impatient of stagnant water or sodden earth; place a few pieces of charcoal upon the drainage, and then proceed to repot the plant. Turn it carefully out of the pot, and pick out the old drainage from amongst the roots, and keep a sharp look out for any worms there may be amongst the soil; remove, also, all loose, old soil, but be very careful not to break or injure any of the roots; put as much fresh soil on the drainage as will raise the ball nearly level with the rim, and then place the ball upon it, and gently work in the fresh compost around it till the pot is quite full, give the pot a smart stroke or two on the bench, and press the soil firmly down in the pot—the operation is then complete. Then give a good watering, and replace the plant in the stove.

Some authors direct this plant to be treated as a greenhouse plant. This is decidedly wrong, in my opinion. It is true, it will live in a greenhouse in summer, but the cold of that position in winter will injure it so much that it will hardly ever recover it if kept in a pot. I have had a good, strong, woody bush in a pot three feet high, and as much through. It was kept in the coolest part of the stove through the winter, and flowered very fairly in the spring; it was then placed in a warm greenhouse till July, and was then set out-of-doors for six weeks to harden the wood, and then replaced in the stove. This management answered in a middling degree, but nothing nearly so well as those above alluded to.

To return to our plant. As soon as it has made its spring growth in the stove, then prepare a place for it in the conservatory border. Take out the old soil two feet square and a foot deep, and fill the place with the compost described above, and turn the plant out of the pot, keeping the ball entire, plant it in the centre of the fresh soil, and give a good watering. The only care then necessary during the summer is to keep it frequently syringed and watered whenever the soil becomes dry. The tops of the branches should be cut off to make the plant bushy; but this should not be repeated later than July, or no flowers will be produced that year. The grand point to aim at is to obtain good stout branches in good time to get the wood well ripened, blooms will then be sure to follow. Every succeeding year the same process should be followed in stopping the branches and ripening the wood. The tree, for it will attain to that character, will grow and flower well for many years. I believe the one at Chiswick is ten years old. The temperature it will thrive in when planted out is 55° in winter, and 65° in summer.

PROPAGATION.—Cuttings taken off about June, a little

hardened at the base, placed in sand, under a bell-glass, kept in a close, warm frame for two or three weeks, and then plunged in peat, strike readily. Pot them off as soon as roots are formed. Keep them close till fresh roots are formed, then place them in a warm stove, and afterwards treat them as described above for the established plants.

T. APPLEBY.

CULTURE OF THE TOMATO.

Long before this article reaches the reader, the plants, on whose culture I purpose commenting, will have been sown, potted off, and advanced some considerable length; for, be it observed, the Tomato requires to be prepared early, and the plants grown on some time in pots before they are trusted out-of-doors in May; but as the process is simple, it is hardly necessary to enter into details; only, as it relates to other things as well, it may be of service to the enquirer to state a few particulars regarding this somewhat singular production.

This fruit, which has been amongst us more than two centuries, seems to have been in as much repute an hundred years ago as now, though, probably, not grown so extensively as at present; nevertheless, there is no reason to believe that the constitutional features of the plant are the same as when it was first introduced, and, very probably, the varieties now in general cultivation may be somewhat more tender than their predecessors, as most improvements in the quality of fruits, vegetables, or flowers, are effected by some sacrifice or other in the hardihood or robustness of the plants acted upon.

Being an annual plant, seeds of it must be saved from year to year. I generally save a few good fruit that may have been damaged, and put them into a flower-pot with sand; they keep very well, and the seed, being rubbed out, ought to be sown in pots early in March, or even in February, if there is not a place where they can be hastened forward. Let the pots be placed in a hotbed, and the seed soon vegetates and grows freely. The seedlings will speedily require potting off, two or three plants together into a pot, and set into the frame again, where they may be allowed to remain until the small pots into which they were potted become full of roots, when they may be removed into larger ones; but they must then, or soon after, be placed in a cooler medium, in order that they be gradually hardened off, so as finally to be capable of enduring the sheltered places in the garden in the open air by the first of May. Not that it is prudent, in all cases, to plant them out so soon, but as they may have to be planted out before long, they ought to be inured to the open air a few days before that operation is performed, giving them some shelter at nights; for though the plant will luxuriate and grow rapidly in almost any soil, yet the slightest frost takes effect on it. Before planting out, the plant should have made a considerable advance of growth in the pot, and if it be, to a certain extent, pot-bound, it will be no worse. In fact, I like them to have the flower-blossoms set and partially opened before the plant is turned out; for though the plant will usually take a rampant growth again, it is more likely to cease doing so, and commence bearing fruit, by being cramped in its earliest growth.

We now come to the station suitable for this singular production; and although it is reported to be quite at home everywhere, and, no doubt, will grow in most situations in ordinary summers, still it is only in favoured places that it will produce and ripen fruit; consequently, it is only the best places that are suitable for it. The shelter and advantage of a wall seems absolutely necessary to make sure of its ripening its fruit; but it will, occasionally, ripen very well on the open ground, when

planted at the distance of three or four feet apart, with each plant tied up to a stake, and the shoots carefully thinned out; but this depends much on the season and other circumstances; and, after all, cannot be recommended in any situations north of the Trent, and but few north of the Thames. One thing, much depends on local circumstances, and still more on the season. The former will sometimes make a difference of a hundred miles or more; the latter, three or four times that amount; but taking everything into consideration, the amateur may safely plant his Tomatoes on such unoccupied portions of his south wall as he can do without injury to the trees, or other more legitimate objects there; they may also be planted on east and west walls with a tolerable certainty of success, or the south side of a close paling-fence will do very well; as the plants are not expected to get higher than four or five feet, and often bear much lower, the object is to get them low, and keep them from attaining too gross and rampant a growth; for that purpose, the ground should not be too rich, neither should it be too moist.

If there is reason to suppose the plants are rambling too much in the latter part of summer, it is good practice to cut the roots all round each plant, at the distance of eighteen inches or so from it, about the beginning of September, or before. This mutilation of roots checks the tending to produce wood, and the plant ripens its fruit better, and the whole goes on as desired.

Now and then difficulties arise;—a dull, cold season renders it no easy matter to obtain good, ripe fruit in the northern counties; but much may be done by severe pruning and exposure of the fruit to sunshine; still, it is not prudent to rob the plant of all its leaves, a certain portion is necessary to support its existence, as well as to ripen its produce; and towards the latter part of the season, some protection at night may be necessary, as the least frost is fatal to the plant.

It is hardly necessary to say much regarding the soil in which this plant may be grown; suffice it to say, that where the natural soil is extremely stubborn in texture, a barrow-load of stone brash, or limy rubbish, will be of great service in opening the staple of the soil, and improving the growth of the plant; but this is seldom necessary, as the soil of most wall-borders is good enough for the purpose.

A correspondent, who wishes to grow a few in pots, under glass, may undoubtedly succeed in doing so; but, usually, few people would think them deserving of pot-culture, unless in situations where their out-door culture was precarious; and even when grown under glass, their growth of long-jointed, useless shoots, far out-run their fruitfulness. I have seen some in a vinery produce fewer good fruit than the same plants did out-of-doors. The richness of the medium in which they were planted, doubtless accounted for their barrenness in one respect, and a fine season compensated for those outside. So that, on the whole, I would not advise their being planted under glass, unless it were some low, upright structure adapted to them. J. ROBSON.

PUNICA GRANATUM.

(THE POMEGRANATE.)

THIS plant, which is so beautiful under the sunny skies of the Continent, barely does more than vegetate under the cloudy skies of England. On the roof of a house in Paris, with which I am acquainted, every summer stands a Pomegranate, grown in the usual square *Caisse* of French gardeners, which is always covered with its beautiful scarlet blossom. I asked the owner of it the treatment he gave it, and he said he gave it always the hottest exposure to the full blaze of the sun, and plenty of water, so that it should always have the earth in a *humid state*. At the approach of

autumn the water is more withheld, the wood ripens, and the tree is housed during winter. Thus, three observances are necessary to the success of the Pomegranate culture in cases or pots: 1st, continued hot sun; 2nd, abundance of water; 3rd, to ripen well the wood in autumn.

We cannot have sun for this in England, so nothing but the most consummate skill will ever make this beautiful tree here anything like what we see it on the other side the British Channel.

The dwarf variety is of easier culture.—W. MASON, *Nacton Hall*.

TEMPERATURES OF JANUARY & FEBRUARY.

SOME common *Laurels* that were chopped down last spring, and sprang up again, have had their shoots much injured with the frost. The *Arbutuses* that were injured with the frost last winter, and grown up again last summer, have only had their tops browned, although they were slightly protected. *Laurustinuses* have suffered. Some old plants have had their tops browned, and their flowers done brown too. *Bays* that were cut last winter, and sent up young shoots in the summer, have been much cut with the late frost.

As a lover of plants, and particularly Orchids, allow me to say that we have had some fine specimens in flower here lately, of which I feel proud. The specimens I allude to are *Dendrobium speciosum*, a moderate-size plant, with eight flower-spikes now just passing its best. *Celogyne cristata*, with eight strong stems of the delicate flowers. We have had a plant of *Calanthe vestita*, the common eye variety, with eight spikes, which lasted in perfection from the middle of October until after Christmas. We have a small collection of *Dendrobiums*, *Cattleyas*, *Laelias*, *Aerides*, &c., so that we are never without some flowers of the Orchid tribe. In the stove there is a plant of *Medinilla magnifica* sending up fourteen flower branches.—ROBERT CHUDLEY, *Under Gardener, Eaton Hall*.

REGISTER OF THE THERMOMETER AT THE GARDENS, EATON HALL, CHESHIRE.

JANUARY.			FEBRUARY.		
Day of Month.	MIN.	MAX.	MIN.	MAX.	Day of Month.
1	40°	49°	22°	32°	1
2	45	50	32	35	2
3	36	48	32	34	3
4	42	47	34	41	4
5	45	50	32	36	5
6	44	50	28	36	6
7	42	50	28	32	7
8	42	47	27	32	8
9	33	46	16	32	9
10	36	48	14	30	10
11	30	46	18	31	11
12	38	43	21	31	12
13	33	42	20	30	13
14	31	41	15	32	14
15	27	39	15	33	15
16	28	32	10	30	16
17	28	34	7	28	17
18	24	34	11	29	18
19	25	33	18	34	19
20	28	35	10	29	20
21	30	33	13	30	21
22	27	36	20	29	22
23	22	30	20	34	23
24	26	31	32	45	24
25	30	37	31	44	25
26	31	37	32	45	26
27	26	36	34	44	27
28	29	36	43	48	28
29	18	37			
30	21	34			
31	26	34			

REGISTRY OF THE THERMOMETER AT BROMLEY, KENT.

The observations were taken from a Sixe's register thermometer, two feet from the ground, exposed to the N.E.; soil gravel; elevation above the sea, I think, about 200 feet; twelve miles south of London. While writing on this subject, I beg to state that the minimum observations are recorded at Chiswick one day backward, if I may so speak; that is to say, my observation on the morning of the 11th of February is the minimum point for the Saturday night, and corresponds with the Chiswick minimum against the date, February 10th. Why they register there on this plan I cannot say, but so it is. There is no use recording the effect of the frost on shrubs, &c., for two months to come.

In reference to a remark of "Gladiator," page 435, I had, last year, several flowers on *Cheiranthus Marshallii*, of a mixed colour, as he describes, and in one or two spikes the whole of the flowers were so. But can you fix such a sport? I have taken cuttings from those spikes, but not a seed could I get, even by the most careful impregnation, nor have I ever been able to obtain seed from the plant, though one or two seedlings spring up yearly round the strong plants. As "G." seems a hybridiser, I should like to know if he has ever obtained seed.—A. R.

JANUARY.			FEBRUARY.		
Day of Month.	MAX.	MIN.	MAX.	MIN.	Day of Month.
11	33°	16°	27°	21°	1
12	34	26	24	21	2
13	35	27	36	24	3
14	36	23	35	30	4
15	30	23	39	31	5
16	34	26	30	29	6
17	25	21	30	27	7
18	27	19	27	25	8
19	25	5	27	25	9
20	27	11	25	15	10
21	25	9	29	1	11
22	30	12	29	14	12
23	31	17	30	21	13
24	36	19	27	7	14
25	36	23	28	17	15
26	35	27	25	9	16
27	32	15	21	17	17
28	32	12	25	5	18
29	32	25	28	3	19
30	27	15	28	16	20
31	23	23	28	13	21
			30	8	22
			35	20	23
			36	21	24
			45	30	25
			36	32	26
			34	30	27
			43	31	28

The first night of frost was on January 10th, thermometer at 30°, and from that date to the end of February there was more or less frost every night. Any averages can be taken from the above tables. The following for February may save trouble:—

THERMOMETER.—Minimum 1° on the 11th. Maximum 45° on the 25th. Average maximum 30.60°. Average minimum 19.40.

BAROMETER.—Minimum 28.95° on the 4th. Maximum 29.65° on the 2nd and 24th. Average at 9 A.M., 29.35°. Average at 10 P.M., 29.36°.

BOSTON SPA, YORK.

JANUARY.			FEBRUARY.		
Day of Month.	Highest.	Lowest.	Highest.	Lowest.	Day of Month.
1	50°	42°	32°	25°	1
2	47	41	36	20	2
3	49	39	37	29	3
4	47	37	36	33	4
5	51	41	35	31	5
6	47	36	36	32	6
7	49	42	37	24	7
8	47	42	30	25	8
9	44	30	31	27	9
10	34	22	32	17	10
11	45	29	36	15	11
12	45	30	33	16	12
13	39	30	32	21	13
14	40	28	31	15	14
15	40	31	31	12	15
16	38	29	27	5	16
17		25	27	6	17
18	35	26	32	7	18
19	37	28	37	9	19
20	34	24	33	20	20
21	33	29	32	13	21
22	33	28	28	7	22
23	34	23	36	14	23
24	37	30	38	20	24
25	37	32	44	31	25
26	37	30	42	31	26
27	36	22	42	30	27
28	36	26	42	30	28
29	33	20			
30	31	24			
31	30	24			

At 10 A.M., on February 16th, the coldest day, particles of snow were observed to fall from a cloudless sky, which, probably, was the freezing of the mist. In January snow fell on ten days, and rain on three. Total rain and melted snow, 0.40 inches. In February snow fell on fourteen days, and rain on two. Greatest depth of snow on the 15th, four inches. Total 2.17 inches. Barometer, January—highest, 12th, 30.53°; lowest 29th, 29.46°. February—highest, 1st, 30.00°; lowest, 4th, 29.05°; on the coldest day, the 16th, 29.80°.

The thermometers from which the observations were taken are three in number, two of which are registering ones. One is placed five feet, one three feet, and one three inches from the ground. Unless the position of thermometers is mentioned, it is totally impossible to judge of the difference of temperature in different localities, because, if the thermometer be placed too high, the lowest point cannot be gained.

The frost here commenced on January 9th and broke up on March 1st. Many of the evergreens look very brown on the south side, and some are decidedly killed, but not many. As yet, however, it is impossible to say exactly what damage has been done.—*Boston Spa, West Riding, Yorkshire, thirteen miles west of York.*

THE APIARIAN'S CALENDAR.—APRIL.

By J. H. Payne, Esq., Author of "The Bee-Keeper's Guide," &c.

BEES IN CONFINEMENT.—My bees had their liberty on the 5th of March, after six weeks confinement, snow being on the ground for that time. As might be expected, there were many dead in every hive, but upon the whole they had suffered less than I anticipated. Those in straw hives were less injured by the confinement than those in wood. Their

store was but little diminished, so that after all they have a fair supply, but I shall feed them as a precautionary measure, though not as a matter of necessity; the winter has, no doubt, tended to this good result, preventing, by its severity, the waste of substance which a mild winter compels. But really, the few last seasons have been so very unpropitious as to be vexatiously discouraging to the apiarian world. I wish that our weather prophet of THE COTTAGE GARDENER would put us all in good spirits by saying that we shall have a *bright, sunny* June. I must certainly have lost all my families had they not been copiously fed in the autumn.

HIVES.—It is now time to examine the stock of empty hives, and to select and clean such as will be required for swarms; it is hives of wood that I allude to, for straw hives should never be used a second time, their cost being now so expensive, they had better be put to some other use, as covers for glasses, or for hen's nests, where poultry is kept; they are well adapted for the latter purpose.

FEEDING.—Those persons who are anxious to preserve their bees must not relax in feeding them. A supply of barley-sugar will answer very well, but they must never be without it. Many stocks have died since the breaking up of the frost, which a little food would have saved; and some have died, leaving ten and twelve pounds of honey in their hive; this occurrence it is not in the power of the apiarian to prevent; it arises, most probably, from the death of the queen, when the bees sometimes at once leave their hive and join some other stock.

PURCHASING STOCKS.—March and April are the two best months for purchasing *stocks*, and May for swarms. It is better to obtain them from such a distance only as they can be conveyed by hand; conveyance by any other means is always attended with danger to the bees. Swarms require less care in carrying from place to place than stocks.

GIDNEY'S FRENCH BEAN CUTTER.



DIRECTIONS FOR USE.—Screw the cutter firmly on the edge of the dresser or kitchen table, top and tail the bean on the upper knife, then pass the bean just through the guage knives with one hand and pull them quite through with the other, and divide the whole across the upper knife into any lengths desired.

Should the beans require stringing, pass them by the lower single knife.

Carrots may be cut into strips and passed through the guage, producing uniform pieces for soups, garnishing, &c.

When this little implement was introduced to our notice we observed, "It must be classed with the wheel invented for putting butterflies to death." It does not deserve, however, to be thus condemned; for we have seen it tried upon a slice of carrot, which is tougher and more intractable than the Kidney Bean, and it did its work well, and the slices, or shreds, were so uniform that they assure us that Beans so sliced must look much more attractive

than when cut in the higgledy-piggledy form cooks usually accomplish with a knife.

The main difficulty will be to overcome the prejudice of cooks. They will find that they "fumble" with the "Cutter," and will then be prompt to condemn it; but if they can be persuaded to persevere, they will find that the "Cutter" will not be a hinderance.

We have received a communication which sustains our opinion, and here it is. It is true, that is from the inventor, but we believe it to be truthful.

"My cook, when I first shewed it to her, at once condemned it. I cut the Beans for her the first and second day, she could then see the utility, and was pleased and proud of it, and heard the praise of our visitors at the dinner-table as to the neat appearance of the beans on the table, and ever since could not possibly do without it, finding it was a saving of time, and a credit to herself as a cook; therefore, the difficulty, I hope, will be got over in time as they get into use. Since I have brought it out, which is not a month, I have received orders for Birmingham, Sheffield, and London wholesale houses for upwards of 400, which tells me that it is thought favourably of."

QUERIES AND ANSWERS.

GARDENING.

GROWING THE BLUE CROCUS.

"In your pages I cannot meet with any information as to growing the *Blue Crocus*. This, certainly, must require different treatment to the *Yellow*; for my garden grows this luxuriantly; but the *Blue*, though I take so much pains, grows up thin and miserable. Can you give me a little instruction respecting this? I should feel greatly obliged.—CYNTHIA."

[Most of us think that all Crocuses do equally well in the same soil; but we are very wrong in so doing. There are between forty and fifty very distinct species of Crocus known to botanists, and some of them run into endless varieties; but there is not one gardener in five hundred who knows ten species, and the generality of them know hardly more than four or five of the species, and about a score of varieties. The dark Blue Crocus which you mean requires a much drier soil than the Yellow ones. It grows naturally on elevated ridges, and it never succeeds in a low, damp situation, nor where the bottom soil is very damp. All Crocuses like "a good holding" soil, or that which is best for Barley; but very few of them indeed like a damp soil, except the large Yellow ones, and they will grow anywhere. If you could get some good yellow loam from a dry common, and put a foot deep of it under a row of these Blue Crocuses, and a little sand round the bulbs, and put them only three inches deep, they will repay you.]

HOW TO BECOME A GARDENER.

"You will greatly oblige me by answering the following questions:—I am very wishful to be a gardener, but I do not know what branch of gardening to fix upon for the best. I have been in a kitchen-garden, in Yorkshire, three years; I am twenty-one years old, and I think it high time for me to have a change, if I intend making a gardener of myself. Therefore, I beg leave to ask what you would advise me to do. Should I go into the market-gardens near London, and then, after a few years' experience, begin for myself in that branch at some of the large towns in Yorkshire or Lancashire? Or would you advise me to go as undergardener at some gentleman's house, and learn to be a serving gardener? Or would you recommend me to go to some of the London nurseries first?—A CABBAGE GROWER."

[At your age, twenty-one, you would find it difficult to enter upon any other business than the one you have been in for the three last years. You ask for advice, whether you should continue a market gardener, or try to get into a gentleman's garden, with a view to qualify yourself to be a head gardener. To continue to be a market gardener, your

idea of going up to London and working in the vegetable gardens there is good. You will see how excellently well the gardeners manage their various crops. You must, however, remember, that to commence market gardening as a master, requires a considerable capital, judicious management, steady conduct, and a good market near your home. Also, great judgment is requisite in choosing the land. To begin with little or no capital, no experience, a great distance from a good and certain market, together with indifferent land, would be the greatest of folly, and could only end in misery and debt. On the other hand, at your age to go into a gentleman's garden, you would have to wait at least four years before you would be (though ever so diligent and persevering) fit to be a foreman; and in that capacity you must serve at least two years, and then twelve months in a good nursery, before you would be able to undertake a head-gardener's position. This may appear a long time, but remember, you by your own account have been only three years in a market-garden, therefore, you scarcely know the simplest part of the business. Taking everything into consideration, we can only advise you conditionally. If you can command, in the course of two years, two or three hundred pounds, and would be satisfied with a moderate living, hardly earned, then go up to London and spend a couple of years in the largest market-garden you can get into; and carefully note and study every part of the business. After that, settle near some large market-town—seaports are the best; and set yourself down for some ten or fifteen years of very hard personal labour; you may then, with God's blessing, have a moderate living by employing others to work for you, and you attend the markets to dispose of your produce. If you have no capital, try at once and get into a gentleman's garden; and, by patient perseverance, you will soon be improving and increasing your knowledge; and, finally, will be sure to obtain a good position amongst your class. Gardeners, however, are plentiful; the market is overstocked; and, therefore, whenever a place is vacant, there is great competition for it; only one, of course can obtain it, and the rest must wait for the next vacancy. In such a state of this business, the next best thing a steady young man can do, is to emigrate to a country where gardeners are not so plentiful. In Canada they are much needed, and, consequently, a good, young gardener, with a few pounds in his pocket, over and above his passage money, would soon get employment. Australia is as yet too young a colony for serving gardeners, though a few near to Sydney are in excellent situations; and as that country becomes more advanced, and more persons with capital increase in number, still more gardeners will be wanted. Improve yourself, therefore, to the utmost, and as soon as you have obtained a fair amount of knowledge and experience, then try for a place, and if you cannot get one, emigrate at once either to Canada or Australia.

The spelling of your letter is bad, no less than fifteen words in your short note are wrong. Try to improve in that by all means.]

BUDDING CHERRIES—PLANTING RANUNCULUSES.

"You will confer a great favour on me, by informing me of the proper season and manner of budding Cherries; also, the proper time to plant *Ranunculuses*, and the soil most suitable to plant them in.

"This severe winter has killed nearly all my standard *Rose-trees* in my garden.—G. J. B., Dinnington, Newcastle-upon-Tyne."

[The best season for budding Cherries is June and July; the very particular week or day depends upon the state of the stocks, and the trees from whence the buds are taken. You may soon find out this by trying them both. The sap should be flowing so freely in both that the bark will easily separate from the wood of both. The method of performing this delicate operation is not easy to describe. With a stock and a bud in a good state, and a proper budding-knife in our hands, we could show you better how to do it in one minute, than we could describe to you in writing in an hour. However, as we cannot have the pleasure of showing you

the operation, we will try to describe it. In the first place, you must procure a good budding-knife, which you may get at any respectable dealer in cutlery; then procure, also, some good soft garden-matting; cut into proper lengths, that is, as long as will wrap round the stock, often enough to cover the entire length of the slit you will have to make in the stock. Take with you a small garden pot, three-parts full of water; in this keep your mat and your scions, to preserve the latter fresh and sappy, and the former soft and moist. Have a good whetstone handy also, to keep your knife in keen, good order. Then take hold of your stock, and in a smooth part of it draw your knife upwards, just deep enough to separate the bark from the wood; this will form what is called a slit, and should be just about an inch long; then, at the top of the slit, make a cross cut, also down to the wood, thus forming a letter **T**. Then take off a bud and a portion of the bark, having previously cut off the leaf, leaving a small length of the leaf-stalk; turn the bud over, and dexterously remove, by a smart jerk, the wood out of it, leaving, however, the wood to the bud itself; then lift up the bark on one side of the slit, insert the edge of the bud, turn the knife over, lift up the other side, and let the whole of the bark and the bud drop into the slit, thrust it down to the bottom of the slit with the ivory end of the knife resting upon the leaf-stalk; should any part of the bark of the bud be above the cross slit, cut it carefully off. Then tie it instantly round, and pretty tightly, too, and the operation is complete.

The proper time to plant the *Ranunculus* is the end of February or the beginning of March; but they will do well to the end of the latter month. You are not alone with your *Roses*; many hundreds of the *Chinese Hybrids* and *Buorbons* are killed round London. The *Hybrid Perpetuals* have suffered the least.]

PEACHES AND NECTARINES IN POTS UNDER GLASS.

"I have, in a small hothouse, a few *Peaches*, *Nectarines*, &c., in pots, which are just beginning to throw out leaves; but as yet I can see no bloom, nor the chance of any. How should I treat them? The house is kept pretty warm, 50° being about the regular heat at night, and in the day, of course, much higher. They were guaranteed to bear fruit this season; so that I shall be disappointed if they do not.—F. G."

[Peaches generally open their fruit-buds before their wood-buds start much, and, therefore, we fear that you have little chance of fruit this year. Let the plants stay where they are, exposed to every ray of sun they can get, with an average of 50° at night, and 60° to 75° during the day. Disbud or remove the young shoots gradually, until at last you leave no more than you consider necessary to form the head of your plant. Give them plenty of water; manure-water several times in a week in bright weather, and send the water from the syringe freely over the foliage as the summer advances. Give air freely, never omitting fresh air even now, unless when very cold. Expose them gradually, and by the middle or end of July get the plants out-of-doors. Screen a little at first, and then place them full in the sun against a south aspected fence; water and syringe as in the house. Before the end of autumn you will have every shoot supplied with flower, as well as wood-buds; and whenever you raise the temperature in which they are placed from 40° to 50° the buds will swell and open.]

GLORIOSA PLANTII CULTURE.—CINERARIA LEAVES TURNED BROWN.

"I am sorry again to trouble you with my questions; but Mr. Fish not having yet given me the treatment of the *Gloriosa Plantii*, causes me to do so. I hope you will favour me with it as early as convenient; and likewise the reason why my *Cineraria leaves* are turning brown and crisp round their edges.—AN AMATEUR."

[We have not grown *Gloriosa Plantii*; but though it is a little different from *G. superba*, we would be inclined to treat

it very much like this, the chief points in the culture of which are detailed p. 480. We applied to a friend about *G. Plantii*, but have not received an explicit answer. Probably Mr. Appleby will give it his attention.

Cineraria leaves present a brown appearance when, after dull, cold weather, we have bright sunshine, and cold air, and light and air are freely admitted. It is generally the result of a sudden extreme from cloud to sunshine, and from a moist atmosphere to a cold and dry one.]

INDIAN AZALEAS WEAK AND STRAGGLING.—IRON FLUES IN A GREENHOUSE.

"I have had several large plants of Indian Azaleas for four years, or more, but have not had a single bloom yet, nor will they have any this season. Could you give me a hint how they ought to be treated? As they are of rather weakly growth, do you think they would be benefited by being cut back? and, also, is there any objection to having an iron flue to pass through a small greenhouse heated by hot-water?—A SUBSCRIBER."

[If your Indian Azaleas are weak and straggling, the best plan would be to cut them back pretty freely, and put them in a place where, without deluging the roots too much, you could keep them in a moist, closish temperature of from 65° to 75°. If the roots are at all in a fair state, it would be best not to meddle with them until fresh shoots had broken freely. If some shoots come very strong, stop them when two or three inches long to equalise them. Do everything to encourage growth until August, when the plants must be gradually exposed to full air and sunshine, which will set and ripen the buds, and the plants should be housed by the middle of October. The treatment of these plants in a healthy state has frequently been given, and if these old plants do not break freely under the above treatment, they had better be discarded, and a fresh commencement made with young ones. Few things like a little moist heat when commencing to grow after blooming; but the plants must be gradually inured afterwards to full sun and plenty of air.

If your iron flue becomes at all hot, it will consume the oxygen in the greenhouse with a vengeance. If the first part was covered with sand that would be avoided. We would prefer the strong glazed water-pipes mentioned at page 478.]

ALLAMANDA NERIIFOLIA AND MEDINILLA SPECIOSA CULTURE.

"Some months since you kindly answered an enquiry as to *Allamanda verticillata* culture, and recommended its being cut down to induce it to flower. As the plant I have as *A. verticillata* is entirely different from the other *Allamandas* in its habit, having no climbing propensities, but being a stiff shrub, I have thought whether my plant is rightly named, and enclose a leaf for your inspection.

"I have a plant of *Medinilla speciosa*, which, till last December, was a fine plant; from some unknown cause it has now lost nearly all its leaves, and some of the stems seem decaying. Can you give me a few lines of advice as to its culture?—H."

[The leaf was very much dried up before we received it. We are doubtful if it is an *Allamanda* at all, the veins proceeding more at right angles with the midrib than is usual with that genus. It nearly resembles the leaf of *Allamanda neriifolia*; and if so, it must be treated differently from the others, as it is a neat, stiffish shrub, that produces bloom on the points of the young shoots, and very freely too. We have had this plant several times in bloom, in one season, just by pruning back as soon as it had done flowering, and the young shoots that came on brought the bloom on their points, or near them. From every bud well-ripened last autumn a shoot will be coming now that will be soon showing its bloom, and by this may soon find whether your plant is *neriifolia*. We suspect your *Medinilla* has been too cold, or there has been an escape of gas from the flues or stove. We presume it has been well

drained. It should not be long below 60° even in cold weather.]

HEATING A GREENHOUSE.

"I am about erecting a greenhouse, which you will see by the plan is seventeen feet by ten, and height to suit. It will join another small one, which I propose turning into a potting-house, and to keep mould, pots, &c.; there will be two doors, and two top sashes, and ventilators in the front wall just over the pipes. That will be enough ventilation, will it not? Do you think I shall be able to have the stoke hole in the corner of the potting-house, as it will save me from being in the open air? What boiler do you recommend, and size? Will not one flow and return three-inch pipe be enough, as it is only wanted to keep Geraniums, &c., in?"

"I shall have a pit just over the pipes when they come out of the boiler filled with broken bricks, sand, &c., for striking cuttings in.—A CONSTANT READER."

[As best, every way, we should recommend you to have the stoke-hole in the part intended for the potting-shed. It will also make that place more comfortable in bad weather, and had you plenty of light, many deciduous things might be kept there in winter, Dahlias, &c. If all the same to you, we would recommend taking the pipes round to the other end of the house. We would also advise four-inch pipes instead of three-inch, though three-inch would do. If the flue was carried for a certain length in the house you would secure more heat. One of the small saddle boilers would suit you, such as was advertised lately. We have frequently complained that a small boiler for such a place was a great want, and makes many a one rest content with a small flue, or such a contrivance as was mentioned the other week by our correspondent from Edinburgh. You will require a ventilator at the highest point in your roof.]

A SMALL PIT FOR MELONS, CUCUMBERS, AND CUTTINGS.

"I have a three-light frame, together twelve feet by six feet; and I wish to know if it is possible to arrange so as to grow Melons, Cucumbers, and cuttings, each in separate compartments. I have one of Joyce's stoves, which I propose to place in the corner, and to conduct the pipe for the smoke through the entire length; by which means I fancy I may be able to get a good top-heat. For a bottom-heat, I have dug out the bottom two-and-a-half feet deep, and I propose to put in eighteen inches of hot manure; on the top of that well-rotted stable manure, six inches, and then to fill up with suitable mould. Now I want, if possible, to grow Melons in the first, Cucumbers in the second, and reserve the third for seeds, cuttings, or other matters that may require a little heat. I intend planting my Melons and Cucumbers in pots, so that I can remove the pots and frames on which they are trained altogether, when the manure is worn out at the bottom, put in the new manure, and replace the pots and frames again in their places. If I can do this, perhaps you will also be kind enough to inform me what sort of Melon and Cucumber, (the names), can be best grown in such a situation. If I cannot grow both in the space, which you think is best to try with, Cucumber or Melon? Also the names of the best works on the growth of Melons and Cucumbers.—L. W."

[The subject is a large one, too large for this place; but take the following in the meantime.

1. Six inches more dung would enable you to do all you propose without a stove, merely with the assistance of linings, after this season of the year.

2. Your stove would not enable you to get enough heat without linings at an earlier period.

3. You wall up your stove close to the glass, but even then gases will escape, and will destroy your plants. If you use it at all it ought to be outside.

4. We have no faith in your moving pots and trellis with plants growing; the plants would be injured. Where would you put the plants when renewing the bed? What if a little of the fresh dung was not quite sweet? The rankness and the gas from the stove would soon settle matters.

5. Your idea of devoting a bed to so many purposes is good, if you cannot do otherwise; better place a board division between each, and each light will be easily treated as it requires.

6. What is the pipe you contemplate? See what is said by Mr. Fish of an iron pipe, to-day.

7. *Cuthills* and *Stockwood* Cucumber, and *Bromham Hall* and *Golden Ball* Melon.

8. Read this work, and consult Ayre's, Mill's, Moore's, and Duncan's books on these fruits.]

CLIMBERS FOR AND PLANTS FOR THE BACK WALLS OF GREENHOUSE AND STOVE.

"A SUBSCRIBER has a greenhouse twenty-five feet long, and a stove fifteen feet long, with span-roof, and back wall ten feet high. A border runs along the back wall of each. She wishes to know if a Peach-tree would flourish on the back wall of the greenhouse? there is a stage in the centre of the house. If not, what plants would be most ornamental to train on the wall? Also, what climbers would bloom in succession through the greatest part of the year, to train up two pillars and eight rafters; but they would have to be grown in pots or boxes.

"She also wishes to be informed of the best plants for the back wall of the stove, one pillar and five rafters."

[The Peach-tree will do very well on the back wall of the greenhouse, provided the stage is not so high as to shade the tree from the sun, and provided, also, the climbers from the roof do not shade the tree injuriously. If much shaded, the fruit will be deficient in flavour; and as the wood will not be well-ripened, there will be little blossom, and that will not be likely to be perfect, and, therefore, not set freely. If the Peach is relinquished, the wall might be covered with various things, such as *Camellias*, as noticed at Wilderness Park, last year; with *Oranges*, with *Passion-flowers*, with *Cactuses*, with *Geraniums*, with *Acacia urmosa*, &c., or a mixture of all. The *Greenhouse Climbers* may be *Habrothamnus elegans*, *Dolichos lignosus*, *Bignonia Chererii*, *Kennedya Marryattæ*, *Zichya coccinea*, *Hardenbergia monophylla*, *Kennedya nigricans*, *Passiflora Colvillii*, *Passiflora carulea ramosa*, and *Mandevilla suaveolens*. The back wall of the stove, we would cover with *Passiflora quadrangularis*, or give it a carpet of green with *Ficus stipulata*, and then have such plants as *Hoya carnosa* thinly trained in front of it. *Climbers for stove*, *Ipomea Horsfalliæ*, *Passiflora princeps*, *Passiflora kermesina*, *Stephanotus floribunda*, *Ipomea Learii*, and *Begonia venusta*. For these, pots not less than fifteen inches across will be necessary.]

BOURBON ROSES FOR CLUMPS.

"I am about planting a clump of Bourbon Roses on the lawn, aspect from south-east to south-west. Sheltered from the west, north, and east, by the house tall trees and shrubs. I am not quite sure which would be the best to plant them on; their own roots, or grafted on the roots of the *Manetti*, *Celine*, or *Boursault* stock, or budded on either of those stocks, from four to six or eight inches high. I grow the Tea Roses on their own roots (same aspect,) most beautifully, by covering the clumps three inches thick with cinder-ashes all winter, take the ashes off the first week in April, and pruning them close at the same time. Your opinion will much oblige.—M. M., *Weald of Kent*."

[No Roses look better in clumps than Bourbons. The soil should not be very strong for them, but as rich as it can be made. A bed made for Asparagus by an old-fashioned gardener would be just the very best bed for Bourbon Roses that could be made. In such a bed none but the very best kinds should be planted. The following are the very best in each shade of colour of those that one can buy cheap, except, perhaps, *Acidale*, the only White Bourbon we have. In some places this Rose is the very best in the autumn; in other places it never pays for its keep. *Acidale* is the best and only white. The *Malmaison Rose* is the next tint—a blush. *Madame Nerard* and *Queen of Bourbons* the next, of a deeper blush. For rose colour, there are none

better than *Edward Dufosses*, *Madame Margat*, and *Bouquet de Flore*. For deeper rose or carmine the very best are the old *Marquis de Moyria*, *Justine*, and *Henri Lecoq*. The next shade in light crimson, and of them the best, are *Comte du Rambuteau*, *Aurore du Guide*, and *Comice de Seine et Marne*. The dark fiery crimsons are the richest of them all, and *La Quintinie* is the richest of them. *Scipion*, *Charles Souchet*, and *Paul Joseph*, are, perhaps, the next best of the dark crimson; *Dupetit Thouars* is yet almost as good as any. The Exhibition Rose (*Souvenir de l'Exposition*), *Reveil*, and *Adelaide Bouchere*, are three of the first water in this class of dark Roses. As Roses are the better for being transplanted "afresh" every second year, you will soon rectify the heights and colours according to your own eye, and as your soil will tell on your plants. If your soil suits the *Manetti*, have them on that stock, and as low as you can get them; if not, prefer those which are budded on the *Dog Rose*. Like the rest of the world, you may probably want a blaze the first year, although the plants might die the next, and if you do, these delicate Roses on their own roots are not the best to begin with. You can raise Rose-cuttings for yourself, and plant them out when they are big enough.]

TOMATOES IN POTS UNDER GLASS.

"I wish to grow a few *Tomatoes* in pots, and I wish to grow them in the vinery if possible.—T. W."

[You will see an article, by Mr. Robson, on *Tomatoes*, in the present number of *THE COTTAGE GARDENER*; but if you think of trying to grow them in pots, you had better let these be tolerably large ones, and stop and thin the shoots as they advance; and do not by any means allow too much fruit to be left on a plant; for being cramped up in a pot it cannot be expected to support so many as when planted out in the border. Water very freely during the summer; but towards the Autumn, when the fruit ripens, let it be more sparingly given, as it is important to check the growth of the plant at this time; and the maturing of the fruit requires but little moisture, unless the house they are in be very dry; this you will be able to judge of at the time; manure-water may be given, when the fruit is growing, but not at the first when the plant is doing so, as there is little fear of that not rambling away fast enough.]

PEARS ON WHITE THORN STOCKS AND MOUNTAIN ASH.

"In answer to the query at page 463 of the last Volume; I know one tree on a White Thorn stock; which bears most abundantly. It is an early summer Pear. Pear grafts, also, take readily on the Mountain Ash. I have seen many in the neighbourhood of Llandilo.—P., Neath."

ORCHARDING. — NUMBER OF FRUIT-TREES IN A GIVEN SIZED HOUSE.—CHEAP WALLS.

The next of *Clericus's* queries are—

3. "How many Vines, Peaches, Apricots, &c., grown in pots, would a greenhouse contain, built as economically as possible for about £50?"

[If you were to erect a *greenhouse*, such as is generally understood by that designation, you would not get much of one for £50, and, consequently, the number of trees you could cultivate would be very limited; but if you were to erect what is called an *orchard house*, you will have a house of greater extent, and one better adapted for the purpose for which you intend it. We have seen, at Mr. Rivers', of Sawbridgeworth, houses twenty feet long and twelve feet wide, which were erected at a cost of from £22 to £25. They are, in fact, large immovable glass frames raised on wooden supports, which are three feet high above the ground at the front and seven-feet-and-a-half at the back. They are enclosed with hedges instead of walls, and the ends are boarded up. The rafters are four-and-a-half

inches by two inches, and are placed at a distance of twenty inches apart. They have a sunken path in the centre to afford head room, and these are called *orchard-houses*. Such a house forty feet long might be erected at a cost of £50, and would hold forty trees in pots placed on the borders thus

.]

4. "Would the above sorts of fruit-trees, together with the Lemon and Orange, do together in one house?"

[Yes. But what do you want with the Lemon and Orange? You must not expect to derive any commercial advantage from them, unless there are a good many "hymeneal altars" in your neighbourhood, and then the "blossoms" may be wanted; but if you live among plain, matter-of-fact people, who only go to church *to be married*, without sacrificing, we fear the cultivation of Oranges will be unprofitable.]

"5. In *McIntosh's Practical Gardener*, vol. i., he speaks of the possibility of constructing cheap walls, made of Russia matting, or reeds, or wooden supports, covered with felt, which would serve very well for the cultivation of Pears, Peaches, &c.; such walls not being more than six or seven feet high. Do you think that fruit-walls could be raised on a cheaper principle than by brickwork?"

[We suspect this is more beautiful in theory than in practice. From what we know of felt and Russia matting, we do not think they would last long enough to see the trees in a bearing state; and even if they did, there would not be substance enough in either of them to absorb sufficient heat to assist in ripening such fruits as Peaches, &c. We have seen walls formed on the principle of hurdles, such as are used for sheep-pens, and plastered over with a mixture of strong clay, and chopped straw, which would answer much better than either of the above for ripening fruit. We have also seen, in some districts, where chalk or stiff clay abound, capital walls formed by forming these substances into a "pug," mixed with chopped straw. In such cases, the cost is merely in labour, the material being dug on the premises. Such walls are very durable; and if we mistake not, the whole of the Peach culture of Montreuil, near Paris, is carried on by means of such walls. We know of no other material which can be depended on except bricks, the cost of which you can ascertain in your own neighbourhood.

We shall continue answering the queries next week.]

POULTRY.

SPANISH FOWLS LOSING THEIR NECK FEATHERS

"I have ten Spanish hens and one cock in a yard twenty feet by sixteen. The roosting-place being very dry and warm, seven feet long, three feet wide, and four-feet-six high, the floor being five feet from the ground, with a laying place under, and dusting place under that. My fowls all moulted in October and November, after which they looked beautiful in plumage; but within the last two months they have most of them lost all their feathers from their necks, now looking ragged and miserable. Some of them have lost more than others, extending over part of the breast. Many of them are laying, but their appearance is anything but agreeable. They are fed regularly on good barley and oats, and the droppings removed from the roost removed frequently.—MC DONALD."

[The diseased action of the skin, resulting in the loss of the feathers of the neck, may arise from the fact, that the fowls are crowded in a confined space; twenty feet by sixteen is by far too small an area for a dozen fowls. If five or six hens and a cock only were kept, the place cleared out daily, the ground turned up occasionally, and a little quick-lime dug in to purify it, if it has become foul, and a daily supply of green food given, I have no doubt but that they would do well. But as the question refers rather to the cure than the prevention, I would suggest giving the affected birds an alterative, such as a five-grain Plummer's pill each, and would supply them with green food, and, if possible, a few worms, or a little chopped raw meat occasionally; and,

in conclusion, refer to an article on "Poultry in a Confined Space," in the number for March 6.—W. B. TEGETMEIER.]

THE BLACKS IN POULTRY.

"I should be glad of any information respecting a disorder which has attacked my poultry, and called by the farmers' wives in Devon, 'the blacks,' and considered by them incurable. I have lost several; some, apparently well at night, and drop off their perch, with comb and flesh turned black; one bird only I saved; a young cock, his comb became dark, his feathers drooped, and he moped about; I gave him castor-oil, bled him in the comb, and fed him with a little meal occasionally. He has had two attacks, and is now getting bad again. He is a Pheasant Dorking, nearly two years old. I find the Dorkings more liable to it than the Cochins, the only two sorts I keep.—C. S., *Sidmouth*."

[The information here given is too meagre to found a correct diagnosis upon. It would be requisite to make a post mortem examination to come to any satisfactory conclusion. There is evidently some serious disease of one or other of the important internal organs, possibly inflammation of one of the digestive viscera; but this is only a surmise. I should advise attention being paid to the diet; the fowls may possibly eat some injurious substance.—W. B. TEGETMEIER.]

PARALYSED PULLET.

"I have a pullet which seems to suffer a great deal, but what is the matter with it nobody seems to know. It cannot walk without falling about in a most ridiculous manner, and it holds its feet clenched, and they seem quite dead below the joint. It is not getting better or worse; I do not know what to do. Is it paralysed? is it cramp? or what is it? Had I better kill it and have done with it? or could you inform me a remedy?—AMATEUR."

[The pullet is evidently labouring under partial paralysis; no treatment is likely to prove beneficial, and it would be the best plan to kill it at once. Paralysis arises from a disease of the brain or spinal cord, and may be regarded as incurable if of long standing.—W. B. TEGETMEIER.]

INDIAN GAME FOWL.

"Will you tell me what a real Indian Game Fowl should be; giving particulars of colour, shape, carriage, &c.? and what fowl they most nearly resemble? and if you know of any means to induce Rooks to take to trees to build their nests upon? and when is the right time to commence cutting grass lawns or walks?—AN OLD SUBSCRIBER."

[The general features of the Indian Game are those of the English bird, but the former is usually heavier and of stouter form, being, consequently, devoid of the extreme symmetry of our English breed. As regards colour, there are the same varieties, and the comb is single, although, in many instances, where the birds passing under this name have more or less Malay blood in them, the connection is evidenced by this feature becoming coarse and partially warted. We are not aware of any means by which Rooks can be induced to take up their abode in a locality not chosen by themselves. Cut grass lawns as early as possible after the spring growth has commenced.]

DRINKING VESSEL FOR NEWLY-HATCHED CHICKEN.

"WHEN many clutches of chicken are hatched together, there is often a difficulty in providing drinking-vessels for them, for any vessel into which they are able to fall and wet themselves is decidedly objectionable. To avoid this evil, we constantly see recourse had to such contrivances as basins turned upside-down in plates, saucers full of pebbles,

drinking-vessels made with a series of concentric rings, &c., all of which are more or less objectionable. A water-vessel costing literally nothing, one not liable to be upset, capable of accommodating a dozen thirsty little bipeds at once, and in which they are unable to fall, or even wet themselves, strikes me as a desideratum with most rearers of poultry. The plan to be described is so ridiculously simple, and so absurdly evident, that I am only surprised that it is not in universal use; but although it may possibly have been employed by others, I never recollect seeing it before this season, when I saw it at J. Allison's, Esq.

It consists of two flower-pot saucers, one a size larger than the other; the smaller is turned upside-down in the larger, and the narrow interval between the two filled with water.

Let me beg my readers to try it, and if they do not like it, perhaps they will suggest a better plan.—W. B. TEGETMEIER, *Wood Green, Tottenham*."

TO CORRESPONDENTS.

VARIOUS (*Vida*).—It is unfair to ask so many questions at once. If every one did so, how could time or space be found to answer them? You oblige us to answer you briefly. *White Haricot Beans* can be obtained of the London seedsmen, and will grow in England. The same reply applies to the *Skinless Pea*, *Pois sans Panchmain*. The culture is the same as for the common Pea, and the cookery like that of the *Kidney Bean*. In what volume and at what page are the *Holly leaves* mentioned you name? *Chicory* roots may be dried, roasted, and ground at home, like Coffee. We never heard of the *Sowthistle* being cultivated as pig food. We know nothing about the preparation of *Sheep-skins* so as to make the wool very white. The *Grey straight-eared Rabbit* is the most profitable.

CRAMP IN FOWLS (*Dora*).—The cock you mention should be kept in a dry, moderately warm, not hot, place, with the floor thickly covered with sand and coal-ashes. Feed him chiefly on soft food, and give him daily plenty of green food.

EGGS FOR HATCHING (*Idem*).—No one can tell a fertile egg by outside inspection. Buy them from a yard where there are not more than five or six hens with each cock. Added eggs, however, chiefly arise from the hen being a bad sitter, or her nest too cold.

FLOWER GARDEN (*A Kentish Curate*).—Your centre bed must not have an edging of anything, on account of the way the small ends of so many beds, or tints, point to it in a uniform series. *Mangle's* variegated *Geranium* is the best-fitting plant for the centre, certainly. A *White Petunia* would be the next best. *Emma* and *Huidee* *Verbenas*, in equal proportions, that is, grey and dark purple, mixed on purpose for a neutral bed, would also tell admirably on your own style round the outside; that being as good as any other; but there are many ways of doing that style of figure equally good, and with each style a different centre could be given; that being the key note to the group.

BLACK-BREASTED RED GAME FOWLS (*An Amateur*).—Apply to Capt. W. W. Hornby, R.N., Knowsley Cottage, Prescott, Lancashire.

UNFRUITFUL PEAR-TREE (*C. B., Greenwich*).—The unfruitfulness is probably caused by the early Spring frosts, as the tree does bear sometimes. We cannot give any decisive opinion, however; for we do not know whether the tree is weakly, or over-luxuriant; nor whether it is a standard.

TRUFFLE (*G. Rees*).—A Truffle is an under-ground fungus, much used in stews and other made dishes. Truffles are difficult to find, and dogs are trained to detect them. The person who employs such dogs is "a Truffle hunter."

PYRAMIDAL FLOWER-STAND (*D. S. H.*).—We cannot believe, unless we saw it, that a stand constructed as you represent would retain water, if the holes are large enough to admit the stalks of flowers. Can you let us see one of your stands?

CHURN (*F. A. C.*).—Try the Lewes churn. It is on the rotatory principle, and made by some firm at Lewes, in Sussex.

RHUBARB WINE.—A *Constant Subscriber* wishes to know if the wine described by "W. R." at p. 426 of our twelfth volume, is to be fermented.

IMPROVING A POOR LIGHT SOIL (*T. S.*).—Your newly-broken-up grass field ought to grow a crop of Potatoes without any manure. To improve your soil permanently, chalk, clay, and limy rubbish may be added, and your cow manure will be an excellent fertilizer for all your Cabbages and other crops. Apply it as you would any other dung.


GARDEN MICE (*F. W.*).—We find the common figure of 4 tile-trap the most successful for catching them. To poison them, put an ounce of phosphorus in a pint-and-a-half of water lukewarm, and add immediately one-and-a-half-pound of meal. When cold, mix with it one-and-a-half-pound of butter, and a pound of sugar. Some of this scattered near their haunts is greedily devoured by them and infallibly kills them.

ENGLISH BOTANY (*A Young Beginner*).—The books you mention will instruct you in the principles of the science; but if you wish for a knowledge of British plants, buy Smith's "English Flora." Dry your specimens between sheets of thick blotting-paper, under a moderate pressure.

BRITISH MOSSES (*V. V.*).—Mr. Stark's "Popular History of British Mosses" will suit you.

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WEEKLY CALENDAR.

D M	D W	APRIL 10—16, 1855.	WEATHER NEAR LONDON IN 1853.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in Inches.						
10	TU	EASTER TUESDAY.	30.214—30.130	54—30	E.	—	18 a 5	45 a 6	3 8	23	1 26	100
11	W	Clivina sanguinea.	30.201—30.110	64—37	N.E.	—	16	46	3 45	24	1 9	101
12	TH	Demetrias monostigma.	30.356—30.320	60—44	E.	01	14	48	4 11	25	0 53	102
13	F	Haliplus ferrugineus.	30.346—30.250	61—26	E.	—	12	50	4 30	26	0 37	103
14	S	Haliplus flavicollis.	30.171—30.053	66—29	E.	—	9	52	4 46	27	0 22	104
15	SUN	1ST, or LOW SUNDAY.	30.027—29.990	67—26	N.E.	01	7	53	5 1	28	0 7	105
16	M	Haliplus ruficollis.	30.195—30.103	64—40	N.E.	—	5	55	sets.		0af. 8	106

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 56°, and 36.5°, respectively. The greatest heat, 73°, occurred on the 14th, in 1852; and the lowest cold 20°, on the 16th, in 1847. During the period 102 days were fine, and on 94 rain fell.

LET every one of our readers interested in the cultivation of fruits, and who has a shilling to spare, become a purchaser of the first number of *The Transactions of the British Pomological Society*, which has just issued from the press.* It does not contain, as we are informed future numbers will, communications relative to fruit-culture, yet it contains such an abundance of sound instruction derived from the fruits exhibited to the Society, as cannot be found in any Pomological work recently published in England.

The following are specimens of the contents:—

“BEURRE DIEU.—The specimens from Mr. M'Ewen, of Arundel Castle, which were grown against a wall, were very large and beautifully coloured, but the flesh was coarse-grained, and did not possess the delicate buttery texture and rich and aromatic flavour of this variety when in perfection. In a communication from Mr. M'Ewen, he says, ‘Our soil is loam of a heavy texture, and liberally mixed with flint, substratum chalk. We are three miles from the sea, and when I say that along the south coast we can manage to have abundant good crops of Figs from standards in ordinary seasons, it will be seen that we are most favourably situated. But in this part of Sussex, the Beurré Dieu, Beurré Bosc, and the Duchesse d'Angoulême, never exceed second-class, and I have them in different situations.’ Those sent by Mr. M. Saul, of Stourton Park, near Knaresboro', were grown on standards in an exposed situation, and the soil gravelly loam. The fruit was of good size and colour; flesh tender, buttery and melting, richly flavoured, vinous and musky—very excellent. The same may be said of the beautifully coloured and well-grown specimens from standard trees, contributed by Mr. Bradley, of Somerleyton Hall, near Lowestoft, Suffolk, where he says, ‘the situation is the most eastern point of England, eighty feet above the level of the sea, three miles distant from it, and exposed to east, south, and west. The soil to the depth of one foot is stiff loam, from one foot to three feet strong yellow clay, and from three feet to ten feet strong blue clay.’ Grown under such circumstances, the specimens of Beurré Dieu were very tender, buttery and melting, rich, sugary, and highly perfumed.

“It is worthy of observation that the specimens from Stourton Park and Somerleyton Hall, though grown on standards, and in situations much more unfavourable than those from Arundel, were infinitely superior in quality, though considerably smaller in size. In the case of the former, the soil is a ‘sandy’ loam, while both at Somerleyton and Arundel, it is of a ‘stiff’ or ‘heavy’ character, the only difference between the two being, the mixture of flints and the substratum of chalk at Arundel. It would therefore appear that the mixture of flints and the substratum of chalk, notwithstanding the superior climate, is unfavourable to the successful cultivation of Beurré Dieu.

“Specimens of Beurré Dieu from M. G. Thoyts, Esq., of Sulhamstead, Berks, grown on a stiff clay soil, with gravelly bottom, were of immense size and very highly coloured, three of them weighed 3½ lbs.; but as they were not allowed to be cut, the Society had no opportunity of ascertaining their

merits. Those grown by Wm. Gabbett, Esq., of Catherline, near Limerick, were also of large size, weighing on an average 14½ ounces.

“There were also specimens of this variety from Berwickshire, contributed by Mr. Thomas Hogg, of Coldstream. These from Wedderburn, near Dunse, grown on a south wall, and in a soil of ‘clayish loam’ were full sized, well coloured, and of excellent flavour. From Nisbet, in the same neighbourhood, and from a west wall, they were equal in every respect to the former. And from Manderston, likewise in the same locality, but grown on a standard, they were of good size, very much covered with coarse rough russet, the flesh fine-grained and buttery, but not so juicy as either of the above; still they were very sugary, and altogether very good to have been grown on a standard in that locality. The soil in these three instances being the same, it would appear that, so far north and in such soils, it is better adapted for wall culture than for standards.”

“BEURRE SUPERFIN.—This very fine new Pear was received from M. Langelier, of St. Heliers, Jersey. It is considerably above the medium size, obovate in shape, and symmetrical in its outline. The skin is a beautiful lemon colour, but considerably covered with thin cinnamon-coloured russet, particularly on the side exposed to the sun, where it is so much so as to leave little or none of the ground colour visible. The flesh is very fine-grained, buttery, melting, and very juicy, with an exceeding brisk and piquant flavour, which is peculiar to this variety, and with so delicate a perfume of musk as not to offend the taste of the most fastidious who object to that flavour. This is a dessert Pear of the first quality. It ripens at the end of September and beginning of October.

“It may be well to mention that there is a Pear cultivated in Belgium, under the name of *Cumberland*, which the Belgians suppose to be the same as Beurré Superfin. This Cumberland Pear they say was raised by Dr. Van Mons, at Louvain, but the Beurré Superfin was raised by M. Goubault at Angers, where, according to a communication received by the Society from a respectable authority in that city, the seedling tree is still existing in the garden where it originated in 1837. The Cumberland Pear of Louvain, therefore, cannot be the same as the Beurré Superfin of Angers.”

Such solid success as has been attained by this very young Society, for it is only nine months old, is good earnest of the benefits it will confer upon our national fruit-culture, and we rejoice to see that its future promises to be brighter even than its past. The prospect of a Library, a Museum of modeled fruits, an Orchard, and Orchard-houses, are within its horizon, and we hope that they will soon be among its things accomplished.

Its objects widen and multiply, too, as it advances. The classification of fruits, some Linnæan arrangement, to facilitate ascertaining the name of a variety not only by its fruit, but by its blossoms and leaves, by its wood and buds, are not visionary. We believe that by the blossoms and leaves alone, and by the wood and buds

* *Transactions of the British Pomological Society*. J. Ridgway. Piccadilly, London. Price one shilling. With two woodcuts of Pears.

alone, it is quite possible to distinguish from each other the far greater majority of the varieties of all the hardy fruits. By an examination of all the four parts—blossoms, leaves, wood, and buds—there could be no difficulty in detecting each variety. Founded upon these data, we hope to see a fruit classification attained.

When we see the useful progress that this Society is so unostentatiously making; when we reflect upon the importance of fruit-culture in an economical point of view; and when we remember the numerous Societies for its promotion which have existed for so many years in Germany, Belgium, and other nations of the Continent, we cannot but regret that Societies once powerful to achieve good in this country should not have expended some of their energies in this direction. However, this is a vain regret; so let those now entered upon the field be inspired with a hope for a richer harvest, seeing that it has been so slightly tilled by those who have preceded them.

We have noted that in Germany Pomological Societies are many, and to show what energy inspires the cultivators of this science in that land of the Rhine, we need only quote the Pomological Society of Guben, in Lusatia. This Society was consulted as to the most efficient modes of improving the national fruit-culture, and the following is an epitome of the Society's reply—

"1. Instruct youth in the cultivation of fruit-trees: 2. Instruct also ministers and schoolmasters: 3. Oblige ministers and schoolmasters to acquire information on the subject: 4. Render ministers and schoolmasters responsible for public ordinances relative to the culture of fruit-trees: 5. Establish branch Pomological Societies: 6. Establish a nursery and an orchard for the principal society: 7. Plant fruit-trees in the public places of villages, and along the high roads: 8. Let every parish (*commune*) be responsible for fruit-trees planted in public places: 9. Appoint public watchmen for fruit-trees: 10. Increase the penalties for injuring fruit-trees: 11. Prohibit the destruction of small birds, which are necessary for the destruction of caterpillars; but the sparrow is to be excepted, because it attacks both buds and fruits, and only eats caterpillars when it cannot get any thing else: 12. Establish public officers to superintend the execution of pomological laws, and judge petty offenders: 13. Name an inspector-general for pomological plantations for each province."

MEETING OF THE HORTICULTURAL SOCIETY.—APRIL 3.

THE Roses, the Cinerarias, the Orchids, and the Azaleas, with Begonias, were the chief masses on this occasion; but there were many well-grown specimens of greenhouse plants. The library and the secretary's office had to be thrown open to exhibit part of the collections in, and the passage leading to the large meeting room was loaded on both sides as thick as the plants could stand. The rooms were so thronged with visitors, that by the time the "chair was taken," about three o'clock, there was barely standing room; to move about was out of the question, until the lecture was over.

There was not a bad plant at the meeting, and only two small dishes, or rather samples, of vegetables that were not either first or second-rate. Two of our best Pine-growers sent a Pine-apple each, which were as good, probably, as any Pine-apples ever were at this season; but, nevertheless, they were disqualified by the

judges, and deservedly so, on account of a serious deformity in each of them, caused by a stopping of the growth when the topmost row of pips, or eyes, contracted round the crown, in the usual way, after that, as if nature had taken a sudden thought, the growth of the fruit continued three weeks longer; but the contraction of the ring of pips would not yield, and, consequently, the after-growth looked like a toy Pine-apple on the top of the true one; besides, one of these Pines was too ripe for table. When I saw such beautiful Pines disqualified, I really felt sorry; but then I recollected, that at the very last meeting the ruling passion compelled my own "self" to sing out lustily against some of the things, although it would have been more pleasant to report smoothly, as if everything was worthy of a prize. The fact is, I am getting too good-natured for this sort of thing since I left off being on the "circuit," unless the case is glaring indeed; but all the world are now so well up to gardening, that judges cannot slip out of anything, however unpleasant to themselves individually; so that the Queen of England stands no more chance for a prize at the Crystal Palace Exhibition, next June, or at any of our exhibitions, than Mary Smith, or Janet McFarlan, under similar circumstances.

ARRANGEMENT OF FLOWERS.

I felt like cross-currents of electricity passing over me on hearing, in the lecture, that Her Majesty was the most successful cross-breeder of *Begonias* in the three kingdoms, through Mr. Ingram, her major-domo, at Windsor. There were twenty kinds of Begonias from the Queen, represented by cut flowers and samples of the leaves tied up in bundles; among them were many beautiful crosses, which I shall mention presently; but I must first point out a radical defect in the way they were exhibited. I think I have dispelled the vulgar notion of placing scarlet or glaring colours in the midst of a group of beds. I also think that I have shaken the public faith in the opinion of great painters, as to the right grouping of flowers without reference to the natural ground colour on which the groups are disposed. Her Majesty's Begonia flowers were placed before us on a large piece of white paper, just as an Italian painter would place them; but I hold the plan to be radically defective, against all the queens and painters on the face of the earth. I learned the secret from ladies who were, at the same time, first-rate painters and first-rate flower-gardeners. I have applied the secret in a hundred ways, and never found it to fail, and I shall point out how the Queen's Begonia flowers ought to have been shown, and why that way. There is hardly a bright scarlet in the flowers of this group; those of *fuchsoides* and *coccinea* come the nearest to clear scarlet, and this is the only colour in flowers that is improved by being placed on a white ground; but the easiest way of learning my meaning is to place two variegated Geraniums in good bloom, side by side, one to be the *Flower of the Day*, the other the *Mountain of Light*. The former wants two shades of being a clear scarlet, and the whiteness of the leaves under the flowers makes the colour duller than it really is, and the same kind of leaf heightens the effect of the better scarlet of the latter. Therefore, if you want to see the best effect of any flowers except bright scarlet ones, never place them on white paper. Begonias offer more white, blush-white, French white, and pale pink, than any other genus I can think of, and these are the very tints which are soonest drowned, or subdued, by being set on a white ground; and yet, if the earth of a flower-bed was as white as paper, these tints, or colours, could be safely trusted into the bed, because we shall suppose that thick masses of green leaves come between the white surface of the bed and the light tints in the flowers.

Should the cut flowers of Begonias, therefore, be placed on green paper? I think not; but I never tried the experiment. Natural green can never be exhibited by any art of painting. A natural common, with its natural accompaniment of bushes, banks, trees and leaves, grass, rushes, and all the rest of it, is all clothed in green, and yet two spots of it are not of the same green. Dark blue paper is that which would show off the principal tints of Begonia blossoms; therefore, and if that be true, the Queen's Begonias were seen under great disadvantage; but recollect, that dark blue paper is not best for all kinds of flowers—far from it.

CROSSED BEGONIAS.

Of the crosses among these Begonias, one called *Nitida rosea* will be the most generally useful, and *Nitida rubra* the next; but the latter name is not so appropriate as the first, because the flowers of *rubra* are not so large, or so much like those of the old *Nitida* as those of *Rosea*. Place a bunch of *Nitida*, another of *Nitida rosea* by the side of it, and a third bunch after them of *Nitida rubra*; or if you do not happen to know *Nitida*, place three bunches of Geraniums in your mind's eye, the first to be a very pale blush, the second, a light rose-coloured, and the third, a deep red (*sanguinea*) coloured bunch, and you have the three Begonias, the last two being crosses from the first. For a Fairy Queen, I think one called *Suaveolens rosea* is the best. One called *Ingramii* is far superior to one or two which go by that name—to wit, the *Ingramii* in the collection of the Horticultural Society was as inferior to the real thing as I am to the Prince himself. The true *Ingramii* is a deep rose-colour with a tinge of purple. *Begonia coccinea* is the most difficult to grow well of about thirty-two sorts which I have grown; and in talking on the subject with a friend who has had very many of them under his thumb, he told me that the secret in "doing" *coccinea*, and two or three more shy ones, is to keep loam from them altogether; nothing but leaf-mould and sand, and under-potting would do for getting them to the highest order. I must here observe, that under-potting is to have a plant in a smaller pot than the size of the plant would suggest, and that in such cases, more than the usual quantity of water is generally given to make up the difference.

ROSES.

The pot Roses were just of that stamp which ought to be the aim of private growers. The plants were from eighteen to thirty inches in diameter, and not quite so high. They carried from eight to fifteen full blown Roses each, and many buds coming in succession. They were supplied by one grower, Mr. Francis, one of the principal Rose-growers. The plants had only one year's growth from the bud, and were all worked on the Manetti stock, and were pictures of real health. The kinds were—*Niphetos*, white Tea; *Viscountess de Cazes*, yellow Tea; *Compte de Paris*, blush Tea; *Souvenir d'un Ami*, blush Tea; *Eliza Sauvage*, the same, with seventeen blooms; *Madame de Bravy*, a large white Tea; *Auguste Mie*, Hybrid Perpetual, a fine blush Rose; *Miss J. C. Meynotte*, the same, a crimson; *Geant des Battailles*, the same; *Jaques Laffitte*, also Hybrid Perpetual, and some others. Mr. Francis sent also a large box of cut Roses, principally the same as the above. Mr. McEwen, gardener to the Duke of Norfolk, sent a basket of cut Roses, and two bouquets of Roses in water-glasses; the *Duchess of Norfolk*, a deep crimson pillar Rose, and *Moss Lanii*, with other Moss Roses, were conspicuous in these groups. Mr. Paul, the great Rose-grower, of Cheshunt, sent a large box of magnificent cut blooms, which carried off the palm. *Gloire de Dijon* was the newest to me in this box. It is the best

of all the yellowish Roses out, a kind of buff-yellow. This was also my first good opportunity of seeing *La Quintine*, the darkest purple of all the Bourbons—a magnificent Rose. Mr. Paul told me that this new Rose has the same delicate habit as *Paul Joseph, Souchet*, and such like Bourbons, and none of these will do to be worked on strong-growing stocks, according to my own experience. *Barron Prevost, Madame de St. Joseph, Tea*; a splendid buff: *Narcisse, Tea*, a canary-yellow; *Souchet, General Jacqueminot*, a very fine crimson; *Niphetos, Auguste Mie*, and several others, and all as fine and large as they will be next May.

Has any one heard that Mr. Lane, with his Roses, is gone to Sebastopol, or where? We cannot afford to lose one of the giants of the battles, when we have such hard fighting in the heart of London.

CAMELLIAS.

The rest of the cut flowers was a large box of thirty-two kinds of *Camellias*, from Mr. Collins, gardener to E. H. Chapman, Esq., Haringay House. These were much admired for the large size and brilliant tints of the individual blooms. There was one small plant of *Camellia*, from Mr. Veitch, called the *Countess of Orkney*, a very large white flower, marked with flakes and blotches of pink or carmine, and a large plant of *Doncklaari*, from some one whose name I did not catch.

CINERARIAS.

Mr. Turner, of Slough, sent a full collection of them, and thirteen to the dozen; they were the finest specimens of growth, bloom, size, and symmetry of all the Cinerarias I ever saw. Every one was a perfect model in itself; there will be some difference, to the end of time, as to the best of this or that fancy group, but among good judges there is scarcely ever a question as to the best-grown collection, or the best-bloomed either. The largest flower, and what nine out of ten would call the best flower, among the Cinerarias, was a specimen plant called *Estella*, one lately sent out by E. G. Henderson and Son, of Wellington Road Nursery; a cupped bloom, of a purplish-crimson colour round a white eye. I am satisfied, however, that a lady of taste would pick out *Esther* before *Estella*. This *Esther* is one of Mr. Turner's own seedlings, a bright, shining crimson, and a clear white eye. Another of his seedlings called *Optimum*, and sent as a new kind, is in the way of *Esther*, from the same father and mother; but, if I mistake not, the younger will be the greater favourite after presentation at court. *Loveliness*, crimson, with a ring of white in the eye. *Carminata* is carmine all over and under as far as you can see it. *Amy Robsart*, light purple, and not at all the worse of being of a certain age. *Kate Kearney*, without a blush, is as white as a swan; *Mary Labouchere*, also white; but the tips of the petals are of a lilac cast, making the flower look more modest-like than that of "darling *Kate Kearney*." Then comes *Lord Stamford*, all white except a ring of blue, formed by the stain on the tips all round. *Mrs. Sidney Herbert*, half white and half crimson; and *Lablache*, the deepest and best blue. There is no class of flowers, for which we give prizes, more deserving of it than Cinerarias. Everybody thinks he can grow a Cineraria, but there is not a man in a score who even knows how to set about it; and let me tell you, for I know the fact, that there is more headwork, more eyework, and more fingerwork, required to bring out a long dozen of Cinerarias, as Mr. Turner has done, than in blooming twenty-four Denbrobiums; which brings us to the

ORCHIDS.

There were two collections of them; a regular field-

day between the Messrs. Veitch and Messrs. Rollinson. The former sent *Phalænopsis grandiflora*, which never misses; *Vanda tricolor* and *insignis*, *Cypripedium villosum*, with thirteen large, brown, Ivory-like blossoms, a fine specimen of growth. *Ansellia Africana*, "the only living plant I know of from Fernando Pô," as the lecturer observed, was, indeed, a strong plant, that will keep till the May shows in an intermediate house, as it was only just opening its hundreds of flowers to-day; *Dendrobium Farmerii*, with eight racemes of large bluish-white flowers, having a soft yellow eye; there were sixteen flowers, on the average, on each raceme; and a *Dendrobium nobile*. The Messrs. Rollinson opposed to these a large plant of the balsamic *Dendrobium macranthum*, trained upright, with some scores of large pale purple flowers, which scented the whole room. *Dendrobium densiflorum*, with seven drooping racemes of the richest golden flowers, but how many flowers in a raceme, goodness knows. *Cypripedium Louii*, the most elegant and graceful flower in the whole order, with two flower-spikes, one of which was thirty inches high, bearing three magnificent slippers, Oriental fashion; and the other was twenty inches high, with two such blooms on the top. How delighted my young friend, Mr. Low, jun., must have been when he discovered this Orchid in Borneo. How disinterested of him to have suggested a higher name for it; and how graceful the compliment to depart from this suggestion, in order to commemorate the name of the first colonial secretary of Labuan. *Cattleya Acklandiae* was the next, with two large, handsome flowers, purple and brown. *Odontoglossum hastulatum*—a beautiful thing,—a large white lip, purple eye, greenish, starry sepals, barred with purple and brown half their lengths; *Vanda suavis*, a large plant, together with extra plants of *Dendrobium macranthum major* (*giganteum* is inapplicable). *Burlingtonia fragrans*, with five drooping racemes of white flowers; *Brassia cinnamomum*, with five long spikes of real cinnamon flowers, all but the lip, which is nearly white,—a very marked kind; and *Odontoglossum Pescatoreæ*, a delicate French-white flower. In Mr. Veitch's miscellany were *Chises bractescens*, with three flower-shoots; *Oncidium sarcodes*, a medium-sized flower, and many of them on a long, curved stem, the colour yellow and brown; and a *Dendrobium* "sp.," being the scarce drooping variety of *Nobile*, which was exhibited three years since by Mr. Bunney, and I think later by Mr. Farmer's gardener.

Next the Chairman were two very singular plants, the true *Saracenia flava*, from Mr. Veitch, and an entire new form of *Rhododendron*, from the mountains of Java, sent by the Messrs Rollinson. This plant looked like some small-leaved *Daphne*, or a *Corræa*, with heads of spreading flowers on the top, and the flowers very nearly like those of *Pentstemon cordifolius*, a most singular *Rhododendron*. Next to these was a large plant of *Nephrolepis Davallioides*, a "singularly beautiful Fern," as we were told, from Mr. Moor, of the Apothecary's Garden, Chelsea; and a cut branch of the old *Thunbergia grandiflora*, from Mr. Ingram, of the Royal Gardens.

ACACIA DRUMMONDI, AND ACACIA CULTURE.

The premier plant of the day, however, and the most generally, or likely to be most generally useful plant, was a specimen, five feet high, and nearly as much through, of the elegant *Acacia Drummondii*. This is news indeed. It was only in February or March last year that we had two little plants of them in this room, and I said that one of them was not the real thing, as will be seen in my report. The stars were all against me at the time; but I was right, and all of them agree with me to-day, that the true *Acacia Drummondii* is one of the very finest of the group. Mr. Appleby told us

as much not long since; but no one knew the plant would make such a magnificent specimen. It put me in mind of the *Cytisus racemosus*, or *rhodophena*, as it was once called. It is just as healthy-looking, as close and strong in growth, and as full in bloom. A gentleman in the room asked me very closely about how to manage this *Acacia*, and said, that he had "no luck" with any of the tribe; that they soon got too big or too straggling for him, but that he was fond of them. He reads THE COTTAGE GARDENER, and I promised to answer him in black and white, as such explanations was the chief object I had in view in giving these reports. All the greenhouse-plants, the Geraniums and Azaleas, the fruits and vegetables, at this meeting, will furnish texts for next week; and we shall now conclude with the treatment of *Acacia Drummondii* and others.

The grand secret in growing any plant of this stamp, is to know how to prune it, and what is the right time to prune. I hold this to be the first principle in the cultivation of all woody plants whatever. Five hundred kinds of plants will grow to perfection in the same compost, with the same quantity of water, the same degree of heat and cold, and all the rest of it; but one wrong pruning, either as to cutting, or the time of cutting, may put any one of the five hundred, or the whole of them, in one season, out of tune; or, in other words, destroy their bloom or their fruit at least for one year; and a series of wrong pruning will soon bring the tamest plant to the condition of a wild colt, if not to the condition of a British soldier under certain mismanagement.

From the middle of April to the middle of May is the only time in the year when *Acacias* of all sorts may be pruned; under greenhouse culture, a few show flowers occasionally in the autumn, or late in the summer; but that is more from bad management than a natural habit. Every one of them, in our hands, ought to be out of bloom by the middle of May; some of them cease from flowering as early as January, some in February, some in March and April; but no matter how early they go out of bloom, they should not be "cut" before the middle of April. The whole race flower on the wood which was made the summer before, or on last year's wood, as we say; they will not flower on the wood that was made the *spring before*, or the *late autumn*, before blooming. If one had an *Acacia* as big as an Elm tree in a hedge-row, he might "shred" it up, as they do such Elm trees in England, by cutting off every side bough, shoot, and twig, to the very topmost, say about the end of April; after a while, such an *Acacia* would sprout out all over with young shoots; some strong, some half strong, and some not at all strong. Now, if a man takes a ladder, and rubs off all the very small shoots from top to bottom, there will be more room for the rest; but if he does no more, and allows the very strongest shoots to go after Nature, they will overshadow and spoil the middling ones, which are the best for blooming, and become "bony," or too woody themselves to bloom well. This shows that the middlings ought to be taken the greatest care of, and the biggest branches should be kept in subjection, either by rubbing them off at an early stage, or stopping them before they got too strong. Then all the summer treatment, after a hard pruning, is to thin out the weakest, to stop the strong, and see that none are too crowded, and the whole of this young wood will flower next spring, whether it be from one stem, or from ten stems on the same plant. As far as the theory of the thing goes, you might cut every *Acacia* as close as this every year of your life, and have as much bloom one year as another. But we never want to go to this extreme; plants must have so many big branches to form a specimen, whether it be a bush, or a standard, or for training against a wall, and these are to be got first, and after them, the side-shoots from them, will have to get the annual close pruning. There-

fore, when an Acacia is big enough for its place on the wall, or in the pot, all you have to mind is this, that every bit of it which flowered that spring may be cut in to the last joint or two; and during the summer the shoots or young wood are to be kept thin rather than crowded.

D. BEATON.

LITTLE MATTERS.

THERE are few things that please me more than meeting with habits of thoughtfulness among young gardeners. Great improvements have taken place as respects the heating and mechanical powers brought to bear upon gardening; but I question if, as a whole, young men pay half the attention to "little matters" that they were forced to do twenty years ago. There were failures then; failures from sheer carelessness, from thorough want of thinking rather than from want of theoretic intelligence, are quite as frequent now, when there is less excuse for them. In those by-gone days, when quirks and great secrets were hoarded more carefully than they are now, a youngster would be apt to be told by a grey-headed veteran to do as he was bid, and let the thinking alone to him. Now, it is indispensable that authority should be respected, and definite instructions and orders faithfully carried out; but few masters, even if they did not adopt, would fail to listen attentively to any suggestion of an assistant for performing a particular operation in a different way. Notwithstanding the increasing numbers of clever young men—and they are increasing wonderfully—there is a growing complaint, that extra attention and thoughtfulness are not keeping pace with more general and professional intelligence. I have seen men start several times from their breakfast to give or to reduce air, as the sky was clear or clouded; and something of this attention was required to cut Cucumbers in dung-beds in January, and Melons in April and May. Improvements, and acquaintance with general principles, may have obviated the necessity of such absolute nicety, but there seems to be a growing tendency to perform operations somewhat mechanically, which too often precipitates results that never could have been arrived at had the operator merely troubled himself to think.

LITTLE MATTERS IN WATERING.

During the last twelvemonths I have met with many instances of great thoughtfulness among young gardeners, no less great because the actions developing it were in themselves so trivial and simple. Allow me to mention a few. There is Jacob Careful watering some tender plants in a stormy day in February, as they stand in a pit properly heated. The sash is opened sufficiently to admit the suitable performing of the operations, and a mat is suspended over the opening. At no great distance, Jack Slasher is leisurely performing a similar operation, with the sash drawn back and the cold wind making the leaves a tempting bait for insects, if not candidates for rubbish-heap fame. Here comes the same Slasher to a batch of small seedlings—Lobelias, Calceolarias, &c. He sees the soil is dry, some of the plants are just appearing, others not yet perceptible, and down comes a refresher, in the shape of a torrent from a watering-pot, and then the wonder grows, that the seedlings shank off by the surface of the soil, and many never coming at all, furnish a nice tirade against the rogue of a seedsman, who sends out stuff never intended to vegetate; when a fairish microscope would discover the seed drenched down to a depth beyond the possibility of germinating, or washed overboard, and swept away by the washing and sweeping of shelves and paths. There is Mr. Careful preparing the same needful operation to

seeds taken, in all likelihood, from the same general store; but see, he has got a concave piece of broken pot in his hand, or a small oyster-shell; he holds that a little slanting, close to the inside rim of his seed-pot, and on that he pours gently a sufficiency of heated water to flood the seedlings sufficiently, and wet the soil to the bottom; and his seed-pots, in consequence, are as full and as promising as possible. He has a few others that are still more sensitive to moisture retained about their tiny stems, and he takes the pots of these and sets them in a vessel of water, that the moisture may be admitted from beneath. Or, after having prepared his pots properly, and seen that the compost was well moistened previously to sowing, the pots are then plunged thinly in such a body as moss, so that by keeping the latter wet, sufficient moisture is absorbed by the pots without watering, and thus one great cause of failure is obviated. Even the simple thing of preparing such moss is important. Slasher brings it at once from wood, or dell, and cannot conceive where numberless little slugs that crop over his seedlings so admirably come from. Careful takes the precaution to saturate his moss in a tub with hot lime-water, and no cropping or eating over valuable seedlings annoys him.

LITTLE MATTERS ABOUT CUCUMBERS.

I might fill volumes with such valuable trifles as these. I will merely mention two more cases. Here are Cucumbers growing in a house, bottom heat supplied by hot-water; they are getting exhausted, and a fresh top-dressing is resolved upon. The success of the plan will greatly depend on getting roots to ramify freely in the fresh, new compost. Mr. Slasher puts the compost properly on, and trusts to Hercules or to luck for a favourable result. Mr. Careful has abjured all chance inter-meddlings, and trusts to right-directed efforts; and having the fresh dressing put on all right, he covers the surface with slates or tiles. The absorption of heat by these from the sun, the retention of the heat passing through the earth, from the medium of heating beneath, causes the fresh surface to be nice and warm, and these entice the roots to enter and ramify in it, and soon the compost is interlaced with vigorous, healthy absorbents; while the compost of Mr. Slasher is comparatively unoccupied.

Here are Cucumbers growing in a common dung-bed frame; the leaves are so nigh the glass, that they can escape scorching only by shading; it is resolved to lift the frame four or eight inches. Common bricks put below the four corners of the bed are as good as may be for this purpose, and Mr. Slasher soon does it; and relying upon it, he has the satisfaction of having the foliage burnt some few days afterwards, because the foliage was as near the glass as ever, or the steam from the linings has got in through some opening at the sides not properly secured. The weight of the frame soon pressed the bricks down into the decomposing material, and the box gets back again into its old place. Mr. Careful prevents all this. He places a broad piece of board, the length of several bricks, across the corners of the frame for the bricks to rest upon, and sinking is thus prevented; while rotten or sweet dung is beat round the frame outside, and the earth is firmly secured all round the inside, to prevent any steam from dung not perfectly sweet from entering, and no prejudicial result does or can well follow.

LITTLE MATTERS ABOUT FRAMES.

Some such occurrence as the last, blended with views of economy, no doubt, elicited some of the ideas contained in the letter, from "A young Gardener—Fulham," that has prompted these remarks. To these propositions I will now shortly advert.

The first is having common garden frames furnished with wooden bottoms, and these supported by posts at the corners, four or five feet from the ground, so that fresh dung for heat may be used below them, and around them, without any danger from steam.

Ferguson was no less a great philosopher, when, in poverty and unaided, he discovered great truths that had long been familiar to more learned and erudite philosophers. The young gardener does not show less of the creative and thinking faculty, when, unknown to himself, he hits upon a plan that had been in operation ages before he was born. Close, wooden bottoms for such frames were not uncommon a century ago. Moveable bottoms for such frames, that the plants might be brought near the glass when young, and lowered from it as they got older and larger, were recommended nearly a century-and-a-half ago, and something of the kind was attempted, with success, by the late Mr. Weeks, of the King's Road, the father of the present Mr. Weeks, who is astonishing the horticultural world by the ease and economy with which he heats vast ranges of glass. Numberless are the modes, from MacPhail downwards, that have been adopted for using the heat of dung, when in a rank state, for forcing purposes; but all formed on the principle of admitting the heat without a particle of the steam. One of the simplest and most effectual modes I have met with, where manure was abundant, was to have a narrow pit, some five feet in width, and from four to five feet deep; the half of the enclosed space to be filled with stones and clinkers, in as open a mode as possible, on which the earth was placed. The walls were of four-inch work, supported by piers of nine-inch work; the dung was piled, and turned, and worked; the decaying been removed, and fresh added as wanted. With manure at command, there was no difficulty in securing thus plenty of bottom and top-heat, and a moist atmosphere was maintained inside by syringing or damping the walls. More manure would be required for such a plan than when, as in the case of our correspondent, the manure in a hot state is placed immediately beneath the earth and plants, more especially when not intercepted by a non-conducting medium. For this purpose, though often used, wood is one of the most unsuitable of materials, as it is heated and gives off heat slowly. Means of proper drainage would also have to be secured. Practically considered, provided there was a space between the heating medium and the soil, so that there was no danger of burning, I have never found any bad effects from rank steam coming in contact with the lower portion of earth in which the roots were growing, provided the earth was of sufficient thickness and consistence to prevent any steam or noxious gases penetrating through it. A few holes in the wood, therefore, for drainage, would be attended with no injury if well covered over. When using wood for such a purpose, I have frequently left spaces between the boards, and filled up these with clinkers, lime rubbish, &c., so as alike to facilitate, arrange, and allow the heat to enter the soil freely. A great objection to these close bottoms of wood, in addition to their non-conducting property, is the weight thus given to a frame, if strong wood is used, and the greater difficulty in moving them from place to place, in which their chief utility consists. Were I to use close-bottomed frames for such a purpose, I should prefer having galvanised iron net for bottoms, with firm pieces of wood nailed across, to support, and prevent bulging. Lightness, and the free admission of heat, would thus be secured.

Unless for very early forcing, three feet in height for the posts would be sufficient. Supposing that the frame was from five to six feet in width, the dung underneath would be easily managed as to turning, &c., and provided the sides were banked up a little against the frame,

it would be best to have a space between the dung and the bottom of the bed. With a conducting-of-heat material as a bottom, one barrow load of dung below the bed will be more effectual than several applied as a lining. Instead of four posts, it would be advisable to have a stout rail all round, and if the place was to be used yearly, and wood adopted for bottoming, it would be as well to make a platform at once, and then set frames made in the usual way upon it, as they would be easier moved. The sides and ends of the frame could easily be let into a groove cut on purpose, and with or without this groove, a good plastering of clay all round, inside and outside, and kept moistish, would prevent all noxious steam entering.

Unless, however, there was much hotbed work going on, and it was thus desirable, by means of such frames and pits, to secure the heat that was lost, while sweetening for common hotbeds, the economy of the whole affair would only be more seeming than real, as there is a tendency in all fresh manure to heat violently, and to burn itself out suddenly, so that frequent additions, and waterings, and turnings, must be *resorted* to, to maintain a desirable, equable temperature, whilst a proper made bed of sweetened dung will long maintain a genial equal heat without much trouble. Another objection against all such modes of merely obtaining heat, is that you lose all the benefits of these gases and vapours from sweet decomposing material, such as dung and leaves, the substitute for which, in promoting a healthy, vigorous vegetation, has never yet been found. When I did much more with these common dung-beds than I do now, I found it economical, as respects labour, and more lasting, as respects a desirable temperature, not to work the manure too much before it was made up into a bed, but to secure its sweetness by a layer of six to twelve inches of old material, such as is easily got from a half-rotten hotbed, and on that placing the soil. Even then the bed was kept open by a liberal allowance of faggots being incorporated with it, which thus admitted of heating easily by means of linings; the great secret in securing a continuous heat, is so to build your bed as to admit a sufficient quantity of air to keep up a slow and regular decomposing process, and not so much as would arrest its progress. Many a bed well made has lost its heat because the material was too much decomposed, or packed so closely together that no air could get at it to keep the decomposition going on. Hot-water, it is feared, will render the nice art of making a hotbed properly an obsolete affair, unworthy the attention of any but cottagers and mechanics.

LITTLE MATTERS ABOUT CUTTING BOXES.

The second idea of our young friend is, making small wooden boxes, from eighteen inches square, with bottoms of wood in a similar manner, and then setting them at once in a heap of any fermenting material, without going to the trouble of preparing it, and using these boxes for setting pots of cuttings inside, or planting out the cuttings in such a box at once, so that all may be moved at once, for giving more heat, hardening-off, potting, &c. The idea of these small boxes furnished with suitable small sashes is a good one. I recommended such boxes in preference to hand-lights some years ago, and I did not originate the idea, for Mr. Forsyth had recommended them as every way superior to hand-lights years before. The boarding the bottoms of them so as to move them and their contents at once, is, for such miniature boxes, I believe, a new idea. Here, again, whether for placing pots in at once, or for placing cuttings in prepared compost at once, I would prefer a zinc bottom, with cross pieces of wood to support it from bulging. When such a zinc bottom was placed on a heap of warm dung, a moist internal

atmosphere could easily be maintained by moistening the zinc. Evaporation would not take place so rapidly from wood, and the atmosphere for striking cuttings would not, therefore, be so genial. It would be found not to be all gold that glitters, even as to the saving of labour in preparing the dung. The plunging of such a box into a fermenting heap of rank manure could only be an occasional performance. The manure might be wanted for other purposes; or, as I have shown, the heat might expire for want of moisture and air; and in either case the box would have to be moved. There is a vast deal of truth in the old adage, "that what is worth doing at all, is worth doing well." Supposing that a sufficiency of this fermenting material of dung and leaves had been shaken and turned over several times, and then neatly built into a bed eighteen inches wider than the size of the small frames, and from two to three feet or more deep, according to the season, and then these little boxes were set systematically in a row, would not the whole course of operations be simplified and systematised? Let us not, however, under-value the idea, so far, at least, as amateurs are concerned, with, perhaps, merely one little box or two. On his dung-heap, if he keeps any thing at all in the animal way, he may pitch this frame of his, for sowing, or striking, and, if bottomed with metal, with a very fair chance of success, though wood is not to be despised if better is not to be got.

Be it observed, however, that perhaps one or two turnings more of the fermenting matter would make it sweet enough for a common hotbed. In that case, if a bottomed-box is used, the heat will be more uniform and lasting; and if the cutting-pots are placed inside among the fermenting matter, without any bottom to the box, they will get all the advantage of the nourishing gases, and the moist, genial atmosphere, which causes the cutting to absorb nearly as much as it transpires. Our correspondent may be perfectly assured that the generality of bedding-plants will, as respects their cuttings, do as well planted out in such boxes as his, as if they were placed round the sides of pots. But had I hundreds and thousands of such things to secure at this season, I should certainly go to a little trouble to give the cuttings the benefit of the sweet exhalations from decomposing matter, and in that case, the bottoming of the boxes would be unnecessary. The having all such things in small pots, and being obliged to move them individually, does, certainly, take a little time; but a clever lad soon smacks them into riddles and trays, and little more time is lost than being obliged to get some one to help to move the two-foot square box, with its pots, or soil, as well as cuttings. Something is gained when one man can perform an operation as well as two or more, as assistance to move this and that often takes up much time. Over a prepared bed of dung, built so as to give a genial lasting heat, and on which a common two or three-light box is placed, it is usual to place on several inches of suitable soil, and plant the cuttings in it in rows. In other cases, where we wish more atmospheric heat and moisture, the fermenting matter is about half-prepared, and has a surfacing of hot leaves, or other sweetened material, and in that the cutting-pots are plunged when the heat has risen. For ease in moving and hardening-off when struck, boxes are frequently used of all sizes and divisions, a common one being about three feet long, six inches wide, and three or four inches deep. Each of these is easily moved and carried by a man, or lad, and thus the plants may be easily hardened off. After much experience with hot-water as a heating medium, I always prefer having a little sweet dung and leaves exhaling into the atmosphere of a propagating place when procurable, and suitable for the particular plants. The best of all for spring propagating, bedding, and other soft-wooded plants, I should consider to be a sweet hotbed for

setting the cuttings in, and a hot-water pipe to give sufficient atmospheric temperature, and prevent too much moisture in it in dull weather. For a few cuttings, however, and with but little fermenting material, as the only artificial heating power, these small, close-bottomed boxes, I believe, will be extremely useful.

ROUND PIECES OF WOOD IN THE CENTRE OF HOT-WATER PIPES.

The third idea of our young correspondent, is the fixing of round pieces of wood, two inches in diameter, in the centre of four-inch hot-water pipes, thereby diminishing the necessary quantity of water for filling them, and preserving the whole heating surface of the pipes. The pieces of wood to be kept in the centre of the pipe by three projecting nails in each piece of wood. With every desire to do justice to the ingenuity and thoughtfulness of our correspondent, and to elicit the opinion of others competent to decide, I do not think that this idea is likely to be practically useful, and for these reasons:—

First, it is desirable to have the means of suddenly heating greenhouses to meet sudden frosts, and for this purpose, pipes containing a minimum of water, with a maximum of radiating surface, are the best, as it is seldom that continuous firing is wanted for any length of time. To meet this case, small pipes are often used, or large, flat pipes, with a space for water a little more than an inch. The only objection against such pipes, is the extra power of friction against the sides in the narrow or small pipes, which impedes so far the circulation, that friction would be equally objectionable in large pipes with a column of wood down their centre. Supposing that a round pipe, with this central column of wood, would cost less than a series of two-inch pipes, or a broad pipe, with one-inch hollow, and presently a similar radiating surface, there would be less danger of casualties from stoppages. I once used a piece of wood for similar purpose; but before a twelvemonth it was coated with mud, bits of leaves, &c., and formed a nest for various sorts of sediment, which, with the decaying and fraying out of the wood, threatened to stop circulation altogether.

In forcing-houses and plant-stoves it would not be desirable to lessen the quantity of water, as the heating apparatus is more generally employed, and the bulk of water acts as a reservoir of heat in the house when the fires have become low or are quite extinguished. Though, therefore, the quickly heating of a greenhouse be generally desirable, the retaining of heat in the heating medium is also desirable in forcing-houses, and those structures where a high temperature is generally maintained.

R. FISH.

POIVREA COCCINEA.

(THE SCARLET POIVREA.)

THIS is a fine stove climber, named in honour of N. Poivre, a French amateur. It is, perhaps, better known by its ancient name, *Combretum purpureum*, manifestly a wrong name to a plant producing scarlet flowers. I occasionally, during my journeys, meet with fine specimens of it, but it is by no means common.

The finest I ever met with was in the gardens at Alderly Park, in Cheshire, the seat of Lord Stanley. It covered several rafters, and when in bloom was truly a gorgeous sight, worth going a pilgrimage to see. I have had one or two good plants under my care, but nothing near so fine as the one at Alderly. I am rather surprised that so good and fine a plant should be so little grown. I suppose it is because it is somewhat difficult to pro-

pagate in private gardens. In fact, I never knew a gentleman's gardener that could strike it from cuttings, and it is by no means plentiful, even in the great London Nurseries. With all their means, and skill in the art of propagation, I have found, generally, that a plant that is easily propagated, and is tolerably beautiful, soon finds its way into most gardens. Nurserymen certainly dispose of a great number of plants, but if every plant that is introduced into every garden in the United Kingdom had been purchased at a Nursery, the stock required to supply so many gardens would be tenfold to what it is. These remarks tend to elucidate my idea why *Poivrea coccinea* is yet a (comparatively speaking) rare plant. As it is such a worthy plant, I will fully detail its culture, including the most certain method of propagating it, so as to spread its cultivation to every stove in Britain. At the same time I may remark, that though not so easy to propagate as a *Dipladenia* or an *Allamanda*, good plants may be purchased for four or five shillings, or smaller ones for three-and-sixpence.

History.—It was introduced into this country from Madagascar, about thirty-five years since, and belongs to the Natural Order Combretaceæ. Linnæan class, Decandria (plants having ten stamens). Order Monogynia (one style).

Description.—A rambling-growing, partially-twining, woody shrub. Leaves four to five inches long, oval-shaped, dark green on the upper surface, and purplish underneath. Flowers produced in large, spreading, flattish spikes, individually small, with conspicuous stamens, all of the most vivid rich scarlet, having much the appearance of scarlet feathers. The flowers appear in August and September.

Culture.—To grow this splendid plant to perfection a warm stove is necessary. The heat, in winter, need not exceed 60°; with sun, in summer, it should be raised from 65° to 80°. The situation to grow it in is a small pit about half-a-yard or two feet square, and three feet deep. If this be at the corner of a bark-bed, the plant will thrive all the better for the bottom-heat. If the stove be what is called a stove conservatory, it can, of course, be planted out in the earth-bed with the other stove plants.

Soil.—The roots of this plant are very fibry, white, and somewhat succulent; hence, it requires a moderately rich, light, open soil. I have used sandy loam, heath mould, and vegetable earth in equal parts, mixed liberally with sand, small stones, and charcoal. This compost admits air and water to the roots freely, and allows the latter, when in superfluity, to escape away through the drainage. This last-named article must, in or under any circumstances, be abundant and perfect. In forming a pit to receive the plant, I always was more careful about drainage than any other point. I formed the pit first, and then threw into the bottom a layer of brick-ends, and upon them a second layer of small stones and broken pots, then upon that I laid four or five inches of small twigs, and, lastly, a thin layer of pieces of green turf; this I consider as complete a drainage as it is possible to make. Water can then be applied freely, without any fear of the soil becoming sour or sodden. When the pit or border is duly prepared, and a good plant procured, plant it out immediately. The best time is about May or June. It will then have the summer before it to make growth, and become well-established before the winter, with its short days and long nights, sets in.

Training.—As this charming plant does not flower till it reaches the roof of the house, and has travelled some distance in that higher region of heat and light, the plant should be trained up with a single stem. Any side-shoots should be shortened in, and when branches are formed on the roof, clothed with leaves, these side-

shoots should be all pruned close to the main stem, and in the autumn the side-shoots on the branches on the roof must be shortened in also. It is from the spring-made shoots that the flowers are produced. The second year after planting a few sprays of flowers will make their appearance, and every year afterwards the quantity will be increased.

Watering.—Due supplies of this necessary element must be given, and after the second year, occasional supplies of manure-water must be given, to give renewed fertility to the soil. The syringe, also, must be used frequently, to keep down the red spider. The mealy bug is very partial to this plant, and if it makes its appearance must be constantly destroyed. In conclusion, I have only to state that this plant will not thrive well in a pot, however large. It will live, it is true, and produce a few flowers; but nothing like what it will do if managed as I have described.

Propagation.—There are some species of *Combretum* or *Poivrea* that strike readily from cuttings; such species make excellent stocks on which to graft this shy-striking plant. Strike as many of these as may be wanted, and as soon as they are strong enough, then cut them down, and graft half-ripened scions upon them, close to the earth in the pots. Place them when grafted under a hand-glass upon a heated surface, shading from the sun closely at first, and more thinly afterwards. In six weeks they will be united, and should then have a little air, gradually increasing it till the plants will bear the full light and air. The hand-light may then be removed, and the plants treated in the usual way.

This plant has certainly been struck by cuttings, but very rarely. Some of our readers may wish to try; and if so, the way to proceed is to prepare a cutting pot filled with the compost, and an inch of sand on the top, with a bell-glass to fit, just after the plant begins to grow. Take off some short, stubby shoots with half-ripened wood, insert them in the cutting-pot, give a little water, place on the bell-glass, and plunge the pot in a heated bed, either of leaves or tan; perhaps one in six will grow, and that success ought to satisfy the propagator.

Another mode is root-grafting; but then roots of the species are more difficult to procure than cuttings or stocks; still, whoever has a large plant of any of the Combretaceæ, might take off a few roots and try to graft them. He might succeed, and most probably, with due care, would do so.

T. APPLEBY.

WOODS AND FORESTS.

THE LARCH.

(Continued from Vol. XIII., page 415).

I HAVE, in former papers, described the proper soil and situation for this valuable timber-tree; also, how it should be planted; and the method of raising it from seed; and the nursery treatment. There remains yet the after-management, namely, Pruning and Thinning, together with a short notice of the diseases to which it is subject. These I will try to describe, and direct how to perform in this paper.

Pruning.—All coniferous trees, in a certain degree, yield turpentine, and the time when that flows most freely is in spring. Now, if any of those trees are cut, or wounded, at that season, the peculiar sap flows freely, and the lasting qualities of the timber are injured thereby. It follows, then, that the best season for pruning the Larch is in the autumn, because then the wounds have time if not to heal up, yet to have the surface so cut hardened over, the pores closed to a great

degree, and thus the escape of the life-sap is, in a great measure, prevented. We may consider, then, as settled, that the pruning must be performed as soon as the leaves have dropped. The next consideration is at what age should the Larch be pruned. If it be injurious to prune late in the season, it must be evident that large wounds are more likely to give out larger quantities of sap, even if cut early, than smaller ones. Hence, the branches to be cut off should never be large. In fact, no thicker than the pruner could cut them off with a strong, sharp knife. That being the rule, the trees will require pruning the third, or, at the farthest, the fourth year after planting. It is a sad mistake to leave them to take their chance for seven or more years, merely to save trouble and expense. If they are pruned whilst young they are much more quickly done. A sharp, good hand will prune three times as many trees in the time, and the tree will thrive much better for being thus early pruned.

The manner of pruning is the next point to be considered. The woodman examines the tree before him. If it has three or four tiers of branches, he should only cut off the lowest tier. Each shoot, or branch, must be pruned quite close to the stem. If the tree has five or six tiers of branches, he should prune off the two lowest tiers, at the same time observing if the young tree has two leading shoots. If it has, he should prune close the weaker one, unless the stronger one is crooked, or otherwise deformed, then the weaker may be left, and the other cut clean away. The great object of pruning being in the least possible time to form a clean, straight stem. Many, sadly too many, proprietors of Larch woods think that pruning is of no use; they imagine nature will prune for them, by the upper branches smothering the lower ones, which then will die away, and gradually drop off, and thus save the trouble and expense. A more mistaken notion cannot be. Let any person examine the timber of such non-pruned trees when it is sawn up, and they will find dead branches enclosed by the sound wood, which dead branches will allow wet to get into the timber, and soon cause it to decay. I have frequently seen such timbers with holes right through them, the dead shoot having dropped out. This is a great evil, which will always be prevented by pruning off the shoots with the knife in an early stage.

Every alternate year two more tiers of branches should, without fail, be cut off. When the trees have become too high for the woodman to reach the shoots with his knife, then he should use a broad chisel with a short handle, and a wooden mallet to strike the handle of the chisel with. Place the chisel-blade close to the stem, and give the handle a smart stroke, sufficiently strong to cut off the branch at one stroke, in order to prevent cracking the branch. If it cracks, the wet will get into the stem and materially injure it; hence, all tools used in pruning should be of the best material, and be kept quite sharp and bright. As the tiers of branches not cut off become higher from the ground, the handle of the chisel should be lengthened in order to reach them. It may be necessary, in after years, to have a step ladder to reach them. The tree will then be strong, and able to bear a ladder and a man upon it to prune the higher branches.

Thinning.—This important point requires considerable judgment. The following concise rules will guide the operator.

1st. Thin early. The first thinning should take place as soon as the branches of one tree begin to interlace or touch its neighbours.

2nd. Thin gradually. That is, cut down first about half the trees on a given space. If more than that is done, with a view either to make money of the thinnings, or to save a second going over afterwards, the trees that

are left will sustain such a check by being so much exposed suddenly, that their growth will be stopped for many years.

3rd. Continue to thin till it may be fairly supposed the trees that are left have space enough to form timber of the largest size the land can produce. Then cease thinning entirely, and leave the trees standing to come to full maturity.

Diseases.—The Larch, if injudiciously thinned, or grown in too rich sandy soil, is subject to what is called the heart-rot. This is a great evil; there is no cure for it, excepting cutting down, and replanting, and managing better the next crop. It is also subject, in wet climates, to a kind of gangrene, which spreads throughout the whole tree, rendering it fit for nothing but firewood. I have seen trees of considerable size so diseased that the roots died, and the first hurricane of wind blew them down. This is also a sad evil, and shows the necessity of choosing good, dry soil, on elevated districts, for this tree. There is also a white kind of aphides which attack the Larch in such numbers as to cause a complete stoppage of growth, and in a year or two to kill the tree. There is no remedy for this disease; but it may be checked considerably by cutting down all trees so affected, clearing every stick and branch away, and consigning them to the fire. These insects come periodically. When I was a young lad in the nursery, I remember the nurserymen in Yorkshire were quite in a panic about their Larches, but it passed away, the insects disappeared, and most of the trees recovered. I have not observed them so numerous since.

T. APPLERY.

GARDEN-WALKS AND THEIR FORMATION.

THERE is nothing in a garden, nor connected with it, that affords a greater amount of comfort or gratification than a good walk, for in it "beauty and utility" ought to be strictly united, and, in fact, it cannot justly be called a good one, unless it possesses both these qualifications; and for such walks as intersect the kitchen-garden, utility may be regarded as of paramount importance, for it is reasonable to suppose that the walks in a kitchen-garden have a much greater amount of hard work to do than those in the pleasure ground; their structure must be regulated accordingly,—a larger amount of stone being used in their formation. But before engaging on this duty, let us take a view of walks in general, and see what alterations the last few years have made in the way these have been brought about.

An examination of one of our ancient highways will easily convince us that our ancestors were more liberal in the materials they used in those days than we are now. The same, in fact, as they were in their buildings, furniture, and other things. Indeed, it does not appear that in the good old golden times, there was any lack of materials, and there are few objects now remaining that evince any niggardliness in their construction. Old roads, for instance, contain many cart-loads of large stones for their foundation, which the disciples of "Mr. McAdam" regarded as little short of downright waste. Be this, however, as it may, certain it is, that some of their old roads had withstood a deal of wear and tear, and it is questionable if our present economical plan, as we call it, is not accomplished at a certain amount of loss in the stability of the road.

However, as the cartage of stones and other things always forms an important item in the expense of the whole, we may set it down as a paramount duty to make these go as far as possible, which may be accomplished in many ways with better effect than tumbling them into a pool or dirty hole; for it often happens that

the formation of roads or walks must take place in wet weather, and in muddy places.

The first duty is to well drain the road-way, and, as we suppose our present one to be a garden-walk, it will be easy to convey the water into the main drains by which the garden is intersected, supposing it to be so drained, or if it does not want such draining, still to make sure that the walk be tolerably dry.

My plan in making a new walk in stiff, heavy, clayey ground, is to scoop out the interior, so that the centre of it may be some seven or eight inches deep, or more, while the sides are not more than half that depth; then along the centre, which is the deepest part, I cut a drain, and lay in ordinary drain pipes, filling it up with stones, and a coating of stones all over the foundation of the walk, and then a finer sort of stone, and finally the gravel; the advantages of the ground being cut into something like a furrow at the bottom, enables the water to run off into the drains, and so be carried away. Very broad walks will want two or more of such drains; and I once arranged a considerable width of carriage-front road-way on this principle "of ridge and furrow," which acted admirably, the ground being a tenacious clay, and the situation a moist one; but in ordinary garden walks the best road-stone need not be used, for commoner materials will do; useless lumps of stone, or brick-bats that may have been in a building, will be very useful, especially if there be any of the old mortar adhering, as that is distasteful to worms, which are sad enemies to walks. Clinkers, or the refuse of factory fires, are equally applicable, or stones of any kind, are all alike wanted, the object being to form a sort of bottom through which the water might drain; a harder description of stone may be nearer the top, for the walks of a kitchen garden have often to endure the wheels of barrows and other hand-carriages, so that we must not deny these walks the necessary hardness to bear such heavy loads; at the same time, it must be borne in mind that they must present a smooth, even surface as well.

Supposing the foundation of the walk to be completed, and that a covering of good hard stones, broken pretty small, has been laid over that, we will then see what surface material can be had; and in the first place stands gravel, which is, no doubt, the widest-spread material that we have, and which exists, in one shape or other, over most parts of the kingdom; but it is not necessary here to describe the best, as local circumstances usually determine which has to be used. One thing, however, may be said, that the kind which is cleanest in winter, or wet weather, very often gets loose and feels unpleasant in dry weather in autumn; while that which is somewhat sticky in winter, or after rain, often becomes very hard and firm in dry weather in summer. These points being extremes, it would be as well to avoid both, and select a gravel containing a part of the good properties of both.

Next to gravel are broken stones, or what are called crushed stones, none being larger than a Walnut. These may be used in like manner to gravel, and some that I have seen are preferable to that article; the best being the kind sometimes had in mining districts where lead and other metals are worked; this I have seen formed into a walk superior to that of any gravel that can be had; but as this can only be had in certain localities we must pass on.

Ashes, or the refuse from some iron-works, or other places where extensive furnaces are at work, form pretty good walks, some being of a sort of copper, or bronze colour, and certainly distasteful to weeds and worms, as some of them contain poisonous matter, which makes them a long time proof to weeds. When this can be had, it may, with advantage, be used as a covering to walks; but it is not applicable everywhere; and if not hard, it

must not be used too plentifully in kitchen-garden walks, as the stones underneath it must do the work for it.

Many other substances might be used as a covering; but as local circumstances often determine them, I will add no more at present, but may say, that in billy walks, or those having much descent, lime may be used to some advantage. I have used some lime in a pounded state, mixed with the gravel when dry, and laid on in that state, and after a good watering and beating, it gets very hard. This is the principle of concreting; but I have never yet been able to do it so effectually as to prevent the evil effects of summer thunder storms, where the descent is of considerable extent; but certainly this "concreting" is of great service. I will give the matter another trial and report the result.

I have likewise seen some excellent walks made on the asphalte principle; but this I must leave till another opportunity; only I may say, that the expense appears too great to meet the views of every one wanting a walk in their garden; but for public walks and thoroughfares, I think it is destined to come into general use at no distant period.

J. ROBSON.

THE EVIL STEP.

By the Authoress of "My Flowers."

If there is a sight more particularly distressing than other sights, and which most painfully affects the feelings, it is that of a parent dependant upon children for support. It is contrary to the law of Nature, and, therefore, disastrous in its consequences. Under the most favourable circumstances it never succeeds well; and when things do not go smoothly, the bitterness is indescribable. Even *high principles* are not sufficient to sweeten the cup, for there are so many little incidents and modes of action that do not involve *principles*, which add to, or diminish, social happiness, that the best-meaning people in the world are not always those who make the domestic circle happiest, or who are easiest and pleasantest to live with. It is one of the greatest trials that can be met with, when we are compelled, in the providence of God, to be dependant upon *any* one; but most, *most* afflictive is it, when a parent is thrown upon the support of a child; and on this account, I cannot but hold it an unnatural clause in the great poor-law system, to refuse relief to aged persons, when they have children who are *considered* able to maintain them. We have scriptural warrant for saying "the children ought not to lay up for the parents, but the parents for the children;" and when we have a Bible proof of the right or wrong of any matter whatsoever, we should be therewith content.

John Day is an aged blacksmith, and he very plainly sets forth, in his experience, the miseries of the system against which I am protesting. He has brought up a numerous family, of whom two sons are in the Guards, and one was brought up to his own business. Day was a hard-working man, but he could not teach his children anything more than he himself knew, nor give them light and knowledge which he did not himself possess. It is a melancholy case when parents know not how to instruct their offspring. I do not mean in worldly things, because most people can do *that*. Day could teach his son to smite the anvil, and shoe a horse, as well as any one; but he could not teach him to love and fear God, or to act upon scriptural principles, which alone are able to bring forth *real* fruit. Young people may show buds of promise in their early walk and conversation; but unless there is the water of life at their root, these will be nothing but canker in the flower.

Day lost his wife, and became old and feeble. He wanted to be quiet and comfortable for the rest of his life, and get rid of the everlasting hammer; so, in an evil hour, against the advice and entreaties of his other sons, he gave up his business to the one who had worked with him, upon the understanding that he was to live in his house, and receive five shillings a week, in return for resigning the business into his child's hands.

In an evil hour this step was taken, and it has never been repented of, *but once*. From that day, poor Day's peace, quiet, and staff of bread, have but glimmered and gone out. While the son was subservient to the father, all was in its right place and no mischief suspected; but when the tables were turned, when the son was the payer, and the father the payee, the young man's character was discovered, and the poor old man saw his error and misfortune when it was, alas! too late.

The discomfort of living in another person's house, among a heap of young children, and looked upon as a trouble and incumbrance, is great enough in itself; but poor Day has yet this increased trial to struggle against, that he cannot get his weekly pittance from his son. Sometimes he gets two shillings, and sometimes three, and sometimes nothing at all. He cannot help himself; he has placed himself in his son's power, and there he must now abide. Liberty is sweet, or else the Union might be called a deliverance from such a thralldom. Day used to rent a piece of allotment ground, and there he is still constantly to be seen; but he is tilling it, poor man, for his son, who pays the rent and owns the produce. It is, no doubt, a comfort to get away from the house, to the fresh air, musical sounds, and undisturbed peace of the allotments, and to occupy his once busy hands with lighter work; but he is old and feeble, and nearly starved at times, and has been principally supported through this winter by the kindness of a lady in the village, who has done by him that which his own child ought to have done.

There is a God who neither slumberest nor sleepest. There is a Father who pitieth His people, and whose Son was given to bind up broken hearts, and let the oppressed go free. In the multitude of poor Day's sorrows, comfort refreshes his heart, even the comfort that God alone can bestow. He has been awakened to feel himself a lost sinner, and to seek Him, who "came to seek and to save them that were lost."

During an illness which he has lately had, he opened a little book, the "Companion to the Altar," and it pleased our Heavenly Father to make that the instrument of arousing his heart, and alarming his conscience. He has been always a quiet man, as good, or better than his neighbours; but he finds, now, that *that* will not fit him for eternity. He sees he is not prepared to stand before the judgment-seat of Christ as he is, and he is hungering and thirsting after salvation. The tears of genuine sorrow—repentance not to be repented of—run down his furrowed cheeks, and the meekness of a little child is seen in his desire to gain light and knowledge. The meat that perisheth he has little of; but labour to acquire that "which endureth unto everlasting life," is never labour lost, and will fill the spiritual garner with overflowing treasure. How this blessed possession will sweeten his bitter days! The very struggles and strivings of an awakened spirit seem to deaden us to all secondary things; they leave the mind no time to trouble itself about worthless things of time! How much more absorbing and all-sufficient is the joy when perfect peace enters, and swallows up the trifles that used to vex and distract so much! The peace poor Day is wrestling and struggling for, will be better to him than the best of sons and daughters. The Lord is a satisfying portion, and "no good thing" will he withhold from those that love and trust Him. How mercifully does our pitying Father provide for us in our difficulties and extremities! even under those which we have brought upon ourselves! How tenderly does He drop into a bitter cup the sweetening essence, that makes the loathsome draught almost delightful. *Can* He give a breaking heart a sweeter portion than *Himself*?

Reader! take warning, and take comfort by John Day's experience. Let parents *never* give up their rights, intrusted to them by the Lord; let them *never* place themselves in subjection to those whom they should govern. And let all men remember, Who it is, that can soften and sweeten the hardest and bitterest lot.

MESSRS. JOHN WEEKS'S PRINCIPLE OF HEATING BY HOT-WATER.

In answer to your correspondent, "W. X. W.," of the 13th instant, we beg to state we are quite prepared to enter

into any contract, either with Sir William Hooker, or the Government, to heat the Kew Palm House, or any other building, public or private. And we will guarantee that our boiler shall effectually heat any range of hothouses 1000 feet long, or say buildings of any shape or description equal to hothouses 1000 feet long, which have, or require, 5000 feet of four-inch pipe, and where the temperature is required to be maintained at 65° or 70°, at a cost of 3s. 8d. per day, for fuel and labour. And we further declare, that the whole of our several statements which have appeared in our advertisements, as well as in our controversy with Sir William Hooker, are strictly true, and we might have said much more in favour of our boiler.

We have one boiler heating the whole of our Nursery, consisting of hothouses, greenhouses, conservatories, &c. Many of the houses are of wide and lofty dimensions, are of various sizes, and, together, equal to 1000 feet in length. Throughout the whole of the late severe winter it has not cost us more than 3s. 8d. per day for fuel and labour, and we have always had a command of greater heat than we required; and we could, had we thought proper, have maintained during the most severe period of the season a temperature of 80° in the stoves, and 60° in the greenhouses. This high temperature, of course, we did not require, and therefore, the boiler was never worked to much above half its full power; and we admitted air in all the houses both day and night. Our Nursery, although laid out with great regularity, consists of various detached houses, so that a great portion of the pipes are lost in drains which conduct them from one house to another. The actual area which our houses cover is 13,480 feet superficial; and if we suppose one large house the same as the Kew Palm House, where the whole of the pipes would be made available, we could, in such a case, heat nearly or quite double the area of our houses.

Scientific men will understand that houses or bodies of any description are cooled by their sides being exposed to the atmosphere, and the more houses are detached, the more surface presented itself to the influence of the external temperature. And if on this principle we take the outside measurement of our detached houses, and compare them with the Kew Palm House, it will be found our detached houses measure about twice as much. If we were to use the same *inferior* boilers to warm our various houses to the temperature we require, it is probable we should consume the same enormous quantity of fuel they do for heating the Kew Palm House, namely—seventy-two sacks per day; whereas, now with one boiler, we only consume three sacks of coke per day.

It may be asked—"How is it possible that one boiler can be so superior to another?" The facts are simple. Water becomes heated either rapidly or slowly, according to the surface of boiler exposed to the action of the fire. The boilers used at Kew have only a heating surface exposed to the fire of thirty superficial feet. Our boilers, although very little larger externally, expose a heating surface of 340 feet superficial to the immediate action of the fire; therefore, one of our boilers is equal to eleven of the boilers now in use at the Kew Palm House.

In conclusion, we would observe, that we are not at all surprised that many of your readers, including "W. X. W.," should be "astonished at the very contradictory statements which appeared in *THE COTTAGE GARDENER*, and other papers, from Sir William Hooker and the Messrs. Weeks," relative to the consumption of fuel to heat the Kew Palm House; but as Sir William has chosen to observe a strict silence on the subject, since our reply to his first statement, neither your readers nor ourselves have any other alternative but to fall back on our own judgment; and as practical men of some thirty-six years experience, we have no doubt whatever that it is perfectly impossible to work the twelve boilers now in use at the Kew Palm House, and maintain a temperature of 60° for anything like £300 a year; and that, therefore, some great mistake must have been made by those who gave in such a report of the expenditure of fuel there to Sir William J. Hooker.—JOHN WEEKS & Co., King's Road, Chelsea.

GARDENING FOR THE MANY.

VEGETABLES SUITABLE FOR A SMALL GARDEN.

BEANS—**BROAD**.—*Hangdown*. Sow in December and March. *Green Windsor*. Sow from March to the end of June.

DWARF KIDNEY BEANS.—*Dun-coloured* or *Liver-coloured*. Sow from the middle of April to the end of June.

SCARLET RUNNER BEAN.—Sow in May. The old Scarlet is most prolific.

BEET.—The best *Dwarf Red*. Sow about the first of May.

BRUSSELS SPROUTS.—Imported seed. Sow early in March.

BROCCOLI.—*White Cape* and *Walcheren*. Sow about the middle of June. *Snow's Winter*, *Willis's Dwarf*, and *Chappell's Cream*. Sow early in May.

CABBAGE.—*Earlham*. Sow about the 12th of August, and again in March. *Red Dutch*, for pickling. Sow the same as last.

CARROT.—*Early Horn*. Sow in March and April. *Long Surrey*. Sow in April.

CAULIFLOWER.—Sow early in March, and at times up to the middle of June, and again at the 1st of September, for standing the winter.

CELERY.—The best White and Red. Sow in March. The Red usually stands the winter best.

ENDIVE.—*White Curled* and *Batavian*. Sow in June and July.

LEEK.—*London*. Sow early in spring.

LETTUCE.—*Brown Coss*. Sow at times from February to September. *White Coss*, and *Drumhead Cabbage*. Sow at times from February to July. *Hammersmith Hardy*. Sow in August and September.

ONION.—*James's Long Keeping*, and *White Globe*. Sow in March and end of August. *Silver Skin*, for pickling. Sow in May.

PARSLEY.—Sow in March and April.

PARSNIP.—Sow in March.

PEAS.—*Early Emperor*. Sow in November, January, and March. *Surprise*. Sow in April, May, and June.

RADISH.—*Short Top*, and *White Turnip*. Sow at various times, from February to September.

MUSTARD AND CRESS.—Sow from March to September, out-doois; afterwards in pans or boxes inside.

SPINACH.—*Round-seeded*. Sow from February to July. *Prickly*. Sow in September.

SAVOY.—Sow in March on early border

TURNIP.—*Early Snowball*. Sow in April, and afterwards. *Early Stone*. Sow in June, July, and August.

WINTER GREENS.—As *Scotch Kale*, and *Chou de Milan*. Sow in March.

HERBS.

SWEET BASIL AND SWEET MARJORAM.—Sow in May, on warm border.

HYSSOP, SAVORY, AND SAGE.—Plant cuttings in July.

MINT.—Plant runners in July.

QUERIES AND ANSWERS.

GARDENING.

JACKSON'S POTATO PRESERVATIVE.

"You will particularly oblige me by stating your experience and opinion of this, which I see advertized in your columns.—A."

[Our experience of this preparation is an entire blank; having never tried it; but it is quite possible that it may be of great use, and we incline to expect the more from it, because it professes to be a remedy only for those diseases of vegetables which are of fungal origin. Such are the Potato Murrain, Smut, and Mildew. Better than mere opinion, however, are the testimonials from good, practical men, published by Mr. Jackson. Among them is this, from Mr. G. B. Baxter, of Belmont Farm, Eltham, Kent, in a letter, dated August 28th, 1854.

"I am now about to perform my promise, to let you know how your Prepared Potatoes have turned out here.

"As a practical farmer of some experience, I had despaired

of finding any remedy for the disease; but I must confess that a stronger proof of your process in preserving Potatoes could not have presented itself than I have now to relate.

"One of the fields of this farm, the property of Mrs. Stanbury, was planted with Regent's Potatoes in April last, some of which were prepared by you. The result now is, that the whole of the crop from the unprepared sets is thoroughly diseased and hardly worth the trouble of taking up; while those raised by the side of them from the prepared sets, are not only in a beautiful state of preservation from the disease, but the produce is much greater,—the Potatoes are more numerous than the others; indeed, if there were no such thing as the disease to be feared, it would be worth the trouble and expense of preparing the sets by your process, even for the sake of the improved crops. I shall certainly, for the future, prepare all my Potatoes for seed by your process; and I intend to adopt it for preserving my Wheat from the Smut."]

CULTURE OF LYCOPODIUMS.

In answer to "A SUBSCRIBER," we have to observe that your "Lycopods not looking so well as they ought," is owing, probably, to the fact, that at this time of the year the old branches will be decaying, and the young ones beginning to grow. You should repot them now in fresh compost, give more heat, and syringe them daily. They will soon put on, with liberal management, a healthy appearance. As the old shoots decay, cut them off to make room for the new ones.

Your *Adiantums* are—No. 1. *A. Forianum*: No. 2. *A. cuneatum*. The *Lycopodium reticulosum* is a hothouse species. The following are hardy species:—

Lycopodium Carolinianum (Carolina).

" *clavatum* (Club Moss). A native of Britain.

" *complanatum* (Smooth-leaved). N. America.

" *Alpinum* (Alpine). Britain.

" *dendroideum* (Tree-like). N. America.

" *densum* (Crowded). New Holland. It requires the protection of a frame.

" *annotinum* (Year-old). Britain.

" *inundatum* (Over flowed). Britain.

" *alopecuroides* (Fox-tail-like). N. America.

" *selaginoides* (Selago-like). Britain.

" *rupestre* (Rock). N. America.

" *ornithopodioides* (Ornithop-like). N. America.

" *helveticum* (Swiss). Switzerland.

" *denticulatum* (Toothed).—Switzerland.

" *apodum* (Stemless). N. America.

" *selago* (Selago). Britain.

" *lucidulum* (Rather glittering). N. America.

Hardy Lycopodiums are neither easy to grow nor collect. British species may, of course, be found, but very few of the American species are in this country. The Swiss species are in some collections, and are generally grown in greenhouses. A perfect collection of hardy Lycopods would be exceedingly curious and interesting. To grow them, a close, moist place is necessary. A cold frame would answer for a while to strike newly-collected species in to set them growing. It would take almost a life-time, and a considerable amount of labour and perseverance, to get them together. There is not a good collection, at present, in Britain.

CLOVE CARNATION CULTURE.—ANEMONES IN AUTUMN.

"Last October I had some *Clove Carnations* sent me in pots: they have been placed in a large conservatory all the winter. When may I plant them out in a bed? I want *Anemones* in October and November. When should I plant them?—KATE."

[When the weather is settled, after the middle of April, turn out the pots of *Carnations* under a south wall for ten days or so, then plant them out of the pots, and see that the stems, if any, are well secured with ties, as pot *Carnations* turned out of a conservatory are not so strong to stand against the wind as those which are brought up more hardy in a cold frame.

You can have no *Anemones* in October and November except the common border sorts, and then you must rear them from seeds. If you sow the seeds any time in May, there will be a chance of flowers in the autumn; but we cannot always make sure of this—much depends on the season.]

SAVING DAHLIAS FROM THEIR ENEMIES.

"Can you or any of your readers inform me of any plan to keep *Earwigs* from destroying Dahlias? Last year I planted my Dahlias out on the 18th of May, and in ten days they were all more or less destroyed; in fact, there were some of them that never flowered at all.—SLATER."

[Even *Earwigs* should have justice. They do not attack the Dahlia, as you imagine, in May, nor until they come into bloom, when they are rather fond of tasting the *flowers only*, to ascertain, perhaps, if all the "properties" are right; and for that propensity the florist puts a trap for them to hide themselves in during the day—a small pot, or something hollow, with a bit of moss or hay inside. The earwig is thus caught in an evil hour, and forfeits his life for his prying curiosity.

As soon as young Dahlias are planted out in May, if the *wireworm* gnaws the bottom of the root, the plant flags, or dies outright. Therefore, if a *wireworm* has been seen in turning over the ground for Dahlias, traps must be laid for them also. The simplest and best are the soft stems, or the mid-ribs of the leaves of early cabbages, stuck here and there all over the bed, leaving an inch or so out of the earth. Some one must go round once or twice a-day to pull up the stalks, destroy the wireworms, and push the traps into the earth again. Slices of carrots, parsnips, turnips, or potatoes, are equally good for traps, but not so handy as the cabbage-stalks for catching the marauders.]

A VINE FLAGGING.

"For the past eight years we commenced forcing our early vinery on the 1st of January, and succeeded quite to our satisfaction. This season we commenced as usual, and things went on well till a fortnight since, one Vine (a *Sweet-water*, and entirely planted in the house) flagged. The sun being very powerful at the time, I immediately shaded it, and was in hopes, in the course of a few hours, to see it as usual; but it remains still flagged, yet recruits a little towards the morning. Having fifteen other Vines in the same house looking so well and displaying so much finer show of fruit than usual, I cannot think the cause of No. 16 suffering so. It neither suffered cold nor hunger, nor yet did it bear an over-crop last season. I have not a single insect in the house of any sort (discernible with the naked eye); nor yet did that pest, mildew, ever appear in our houses; yet the idea arose this morning, that it might be mildew (although not discernible) affects No. 16, therefore, I dusted its leaves and bunches with sulphur.—A SUBSCRIBER FOR MONTHLY PARTS."

[The *Sweet-water* Vine is more subject to flag from sudden changes of the weather than any other Grape. As it continues to suffer, we fear the root or the stem has sustained some injury. Once we found, in a similar case, that the stem had been nearly cut through; and in another case, a mouse or rat had nearly eaten through the main roots.]

GROWING TREE-ROSES.

(Continued from Vol. XIII., page 340.)

NEITHER is it a good plan (although often practised) to commence by planting the tree too deep, and then, after the earth has been thrown in, to raise the plant to its proper height by lifting and shaking it. The idea, in so doing, is that the earth is better arranged and settled round the roots, but the smaller thread-like fibres are apt to be torn off by the weight of earth lying upon them, and the plant considerably, though unintentionally, injured.

Whilst upon this subject, I must make some mention of the careless way in which the underlings at nursery-gardens

are permitted too often to take up plants and shrubs for their customers. I shall probably be answered, that no nurseryman can keep a sufficient staff to enable him to transplant with the caution that he is well aware is necessary; but surely they need not be sent out, as they often are, with lacerated roots and broken branches; all too clearly showing that the mode of their removal has been a chop with a spade all round, and the plant then torn up by force. I feel sure that every practical man will agree with me, when I say, that considering the treatment which plants so often undergo in their removal, the wonder is, not that *some* die, but that any at all should live. Let any one of moderate means, and who has not a scientific gardener, visit the actual planting of trees or shrubs, whose places he has previously marked out, he will probably find each plant lying beside its destined site with roots bleaching in the wind and sun, until its turn comes to be planted and stamped into the ground by a pair of heavy iron-shod boots. It is not necessary to add that such treatment suits neither the Rose or any other tree; and most of what is said relative to the planting of the former, may, with equal truth, be said also of all.

Let the Tree Roses, then, as soon as possible after their arrival, be planted, and until then, let them be "laid in by the heels," with their roots well covered. Make the holes for each tree, and plant with as little delay as possible, having a mat at hand to lay over the roots, should the hole require alteration. Settle and arrange the roots with the hand in their natural position; shake on the earth from the spade gradually; if the weather permit, let the roots be puddled in, but if not, press the ground down *lightly* all round, and in either case, mulch with a good coating of litter, which may have a little earth shaken over it to prevent the wind from blowing it away. This coating *ought* to be left through the following summer, and any waterings or liquid-manurings poured through it. Moss may be placed over it to improve the appearance.—G. E. MAUNSELL.

(To be continued.)

TANKS FOR HOT-WATER HEATING.

I HAVE seen several enquiries relative to heating hotbeds by the tank system; and what is considered the best material for making a tank; if you think the following observations, founded on my own experience, will be acceptable to the readers of your widely circulated paper, they are at your service. First, as respects the obtaining bottom-heat by means of a tank. I think the heat is more *equally* distributed by this than by any other method, as by having the tank made as near the width of the bed as convenient, the heat ascends regularly all over, and by having the water in it from four-and-a-half to six inches deep, when once heated it retains the heat a long time. Heating by four-inch trough-pipes, covered with rubble, such as brickbats, &c., with pipes to turn the water into the troughs, is also a good plan, and by many gardeners preferred to a tank. Now, I wish it to be borne in mind, I am not advocating either system; but if care is not taken to fill the troughs when the pipes are at a low temperature, there is great danger of the pipes cracking from the sudden contraction of the metal. I have had three cases of the sort, in houses I have heated, within these last six months; at the same time, I admit it was a want of caution. It is a well-known fact that all metals will expand by being heated; then, suppose the water in the pipes to be heated to 180° or 190°, and the trough empty, the expansion would be very considerable; then turn in about four gallons of cold water into the trough, and what would be the natural result? Why the cold water in the trough occupying about half the circumference of the pipe, contraction would immediately take place, and the pipe would rent as low as the bottom of the trough, and in one instance it rent all through the pipe. The consequence was, the pipes were exhausted, and the heat at once lost. Such an event taking place under a bed of Pines or Cucumbers, in the late severe weather, would have been a very serious affair; but then it may be avoided, by exercising a due degree of *caution* in taking care to replenish the troughs for moist heat, when at the lowest temperature.

Then, as to the best material for making a tank. I have, with my apparatus, heated tanks made from four descriptions of material, viz., wood alone, wood lined with zinc, wood lined with lead, and cemented tanks. The results have been—wood will rot; zinc, I have found, that even rain water will act upon it, and soon destroy it; and lead, by continued expansion and contraction, draws itself asunder, and becomes useless; whereas a cement tank, well made, will last secure for an indefinite period. I heated one for a gentleman at Sutton, near Loughboro', near four years since, and it had been in use some years before, and it now stands as well as ever, and I have had six made myself, and they are all good, and have been made from three years to within nine months of the present time. Should any further explanation be required, I shall be pleased to give it.—JOHN PANNEIL, *Renishaw Iron Works, Chesterfield.*

ROSES GOOD FOR POTS.

HYBRID PERPETUALS.

Baronne Prevost; large blush.
Duchess of Sutherland; large blush.
Caroline de Sansal; light blush.
Baronne Heckeren; beautiful rosy-pink.
Auguste Mie; rosy-blush.
Alexandrine Buchenloff; rich carmine.
Geant des Battailles; vermillion.
General de Castellane; rich velvety crimson.
Gloire de France; shaded carmine.
Triomphe de Paris; ruby, large and beautiful.
William Jesse; dark rose, shaded lilac.
Queen; brilliant rose, large and double.
Prince Leon; beautiful light crimson.
Paul Dupuy; amaranth, fine.
Madame Rivers; light blush, very fine.
Madame Hector Jacquin; delicate pink, very fine.
Louise Perrony; this is the most beautiful of all the bright pink Roses.
Le Leon de Combats; shaded crimson, fine.
Mere de St. Louis; light blush, good.
Madame Andry; dark rose, large and fine.
Jean d'Arc; beautiful double blush.

HYBRID BOURBONS.

Paul Ricaut; rich carmine, fine.
Paul Perras; delicate pink, large and fine.

TEA-SCENTED CHINA.

Adam; blush and salmon.
Compte de Paris; large, cream shaded.
Devoniensis; creamy-white.
Gloire de Dijon; yellow, new and fine.
Madame de St. Joseph; rosy-salmon, large and fine.
Souvenir d'un Ami; delicate salmon.
Viscountess de Cuzes; golden-yellow, fine.

NOISETTE.

Solfaterre; sulphur, fine double.

BOURBON.

Souvenir de la Malmaison; creamy-white, fine.

HYBRID CHINA.

Blairii—No. 2, fine, large, blush.

After making out the list of Roses for pots, at p. 432, of the last volume, I received, from my friend Mr. Busby, of Stockwood, the above list, which he says have been proved the cream of Roses for that purpose. It will be perceived that Mr. Busby mentions a number of fine Roses, chiefly among the hybrid perpetuals, which I had omitted. Mr. Busby being very successful in that department of floriculture, I do not think I can err in presenting to those who intend working in the same field a list which he can so favourably recommend.

R. F.

AUSTRALIAN GRASS SEED.

ONE item in the Exhibition which we had occasion to notice briefly some time ago, is a contribution of Colo grass seed, by Mr. E. P. Capper. As everything bearing upon the pastoral interests of the country must possess more or less interest, we deem it expedient to submit the following particulars, which are gathered from a letter written by the exhibitor:—The seed, when young, resembles very closely the English barley. The spindles are from two to three feet high. The flower and seed stems, when they first show, taper, but open out, eventually becoming so many small fibres, bearing blossoms and carrying seed. The seed is irregular on the febris, similar to the other Australian grasses. It is becoming yearly scarcer in the Barwin districts, from the grazing of the cattle and sheep. In these districts it has always been found in abundance, but at the same time it is common to many other parts of the colony. The aborigines are fond of the seed, and make bread from it. They collect it by carrying pieces of bark or aprons which they pass under the seed-stems of the plant against the wind, and thus gather the seed as it falls. When a sufficient quantity is collected, they bruise or grind it roughly between two stones, water being freely used to wet the meal, and carry it with the bark vessels placed to receive it as it runs from the stones. So very glutinous is the meal, that it hangs in thin threads like ropy water or pieces of jelly. It is often eaten in this state by the blacks, without any cooking whatever. The wet meal which runs from the stones is of a whitish colour, and soon settles in the vessel, having the water above. By pouring off the water, the meal and gluten are collected, and then formed into cakes the size of bakers' small rolls. They are next put into the embers and baked, after which the blacks eat them with evident relish. The taste is not unlike that of barley-bread. The exhibitor says, "My attention was called to this seed by its being found in the Barwin district, and brought down by the bird dealers and catchers, and by always remarking that the birds fed on it were stronger and better feathered than when fed on any other food. Domestic fowls, &c. eat it eagerly."—*Sidney Morning Herald.*

TO CORRESPONDENTS.

BERBERIS DARWINII (S.).—The spray you sent is of this plant: It is an evergreen; but we know that the late severe winter has destroyed its foliage in many places. Thanks for the cuttings. Your other query next week. All but the last in your list are worth growing.

FOOD FOR RABBITS (I. W. C. W.).—You may plant Cabbages, or have a row of Lucerne between your Gooseberry-trees, &c.

SEBRIGHT BANTAM EGGS (A Subscriber).—In answer to the query, where these may be had from a good strain, we have had those of Mr. J. Price, 116, Store Street, Maidstone, very strongly recommended, and we know that the parents are great prize takers. We have been also told to apply to Ilmington Rectory, near Shipston-on-Stour.

FLOWER-GARDEN PLAN (A Constant Reader).—Nos. 2 and 12 quite right; 4 and 10 ditto; 6 and 8 both good, but as match beds they will never do: they should be two blues or two whites; 14 and 17, excellent idea; 15, good; but 16 the reverse: a large mass of reddish-purple, foregrounding a small mass of reddish-pink. Just ask a lady to lay a piece of a geranium-coloured ribbon on a dress of reddish-purple silk, and you will have 17 for the ribbon, and 16 for the dress. Mangle's Variegated would answer 16 very well. The rest are all right; but 1 and 13 being the most suitable sized beds for *Nirembergia gracilis*, we would prefer it to your Verbena.

SPANISH FOWLS PECKING OFF EACH OTHER'S FEATHERS (McDonald).—This depraved appetite very often occurs when birds are too closely confined. Try an abundant supply of green food, if you cannot let them roam.

PRESEEVING DRIED PLANTS (A Young Gardener).—To dry specimens, nothing more is needed than several quires of blotting-paper, and two stout, smooth boards to place those quires between. Spread the specimens in a natural form between the paper, put the paper between the boards, and upon the upper board a 56lb. weight. When the specimens are quite dry, place each in a sheet of demy paper, and write on this the name, classification, place where found, when in bloom, and other applicable notes.

NAMES OF PLANTS (Un Jeune Homme).—No. 1. *Epacris purpurascens*. No. 2. *Epacris hyacinthiflora*. (Mary, Devon).—1. *Anigozanthos coccinea*. 2. Unknown to us without bloom. 3. *Boronia serrulata*. 4. Unknown without bloom. 5. *Adenandra*, or *Diosma uniflora*. 6. *Eutaxia myrtifolia*. 7. *Aphelaxis protifera*. 8. *Chorozema ovata*. 9. *Casuarina equisetifolia*. 10. *Bignonia uncatata*. 11. *Cryptomeria japonica*.

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WEEKLY CALENDAR.

D M	D W	APRIL 17—23, 1855.	WEATHER NEAR LONDON IN 1853.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in Inches.						
17	Tu	<i>Haliphus impressus.</i>	30.234—30.206	59—32	E.	—	3 a 5	57 a 6	8 a 20	1	0 22	107
18	W	<i>Haliphus assimilis.</i>	30.130—30.024	67—41	E.	—	1	58	9 43	2	0 36	108
19	Th	<i>Haliphus obliquus.</i>	29.968—29.868	77—44	N.E.	—	1v	vii	11 2	3	0 50	109
20	F	<i>Hydroporus unistriatus.</i>	29.750—29.566	75—51	E.	02	57	2	morn.	4	1 3	110
21	S	Sun's declinat., 11° 46' N.	29.486—29.357	70—41	S.	01	54	3	0 13	5	1 16	111
22	SUN	2 SUNDAY AFTER EASTER.	29.639—29.341	49—39	N.	06	52	5	1 13	6	1 29	112
23	M	<i>Hydroporus humeralis.</i>	29.111—29.864	47—31	N.E.	—	50	6	1 59	7	1 41	113

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 58.1°, and 37.5°, respectively. The greatest heat, 75°, occurred on the 22nd, in 1842; and the lowest cold, 25°, on the 17th, in 1847. During the period 106 days were fine, and on 90 rain fell.

THE April Meeting of the *Entomological Society* was held on the 2nd instant, J. Curtis, Esq., F.L.S., President, in the chair, and was fully attended.

The Secretary gave notice that the Council had resolved to distribute their duplicate collection of insects among the members, one of whom, distinguished equally by his love of plants and insects, had, in the most liberal manner, undertaken the charge of the arrangement of the duplicates for that purpose. It was intended, at first, to distribute the duplicate foreign Butterflies, foreign Coleoptera, and British Coleoptera, the distribution to commence after the June meeting, and members were requested, in return, to contribute to the Society's collection, from their own duplicates, such species as the Society did not already possess.

Since the last meeting the Society had received a donation of considerable interest from Mr. Francis Walker, being a collection of the British species of Plant Lice, or *Aphides*, mounted on glass in Canada balsam, an excellent mode of preservation, the delicacy of the limbs of these insects rendering them very difficult to be preserved in the ordinary manner in collections.

Mr. Henry Doubleday, of Epping, had also presented to the Society a box of fifty-two rare British *Lepidoptera*.

Donations of books from the Royal Society, the Society of Arts, the Royal Society of Munich, the Entomological Society of Stetten, the Berwickshire Naturalists Club, &c., were also announced, and thanks ordered to be given to the several donors.

Mr. Edward Shepherd exhibited four specimens of a species of *Donacia*; two pinned with the ordinary pin, and two with *electro-plated pins*; the former, although only four or five months old, were now infested with verdigris, whilst the latter pair were still free from this exudation, which is so destructive to cabinet specimens of insects.

Mr. Stainton also exhibited specimens of *Nepticula acetosæ*, a small Moth reared from Sorrel leaves last year, by Mr. Shield, of Dublin, and which were already partially saturated with grease, being the only species of the genus in his collection thus injured, and which Mr. Stainton thought might be attributable to the acidity in the leaves of the plant upon which the insect feeds. Mr. Stainton took occasion to state to the Meeting Mr. Shield's qualifications as an indefatigable entomologist, he having been proposed as an associate

of the Society, a class of members, the admission of which had been resolved upon when the by-laws had been recently revised. Considerable diversity of opinion appeared, however, to exist among the members, as to the advisability of the admission amongst the members of working entomologists, who may not be in a condition to pay the ordinary fees to the Society. For our own part, however, knowing how well the associate system works in the Linnæan Society, and feeling convinced that the admission of a few well-selected associates from the poorer classes of collectors would be regarded by those elected as an honour, and by their friends as a motive for fresh exertions, we would earnestly advocate the adoption of the system.

Mr. Foxcroft exhibited a number of fine *Lepidoptera* reared from larvæ taken last year in Fifeshire. Mr. Foxcroft is about to undertake another journey to Scotland, and requests fresh subscriptions for the insects which he may capture. He also exhibited specimens of *Papilio Machaon*, reared from two very distinct varieties of the larvæ.

Mr. S. Stevens exhibited specimens of the singular and very rare *Eucheirus longimanus*, brought from the Eastern Archipelago, by the celebrated traveller, Madame Pfeiffer.

A notice was read, from Mr. Wallace, containing a description and figure of a grand, new Butterfly, from Borneo, which he proposed to name *Ornithoptera Brookeana*, after the Rajah Brooke.

Mr. Curtis read some notes on several curious kinds of *Galls* found upon different species of Oaks in the Crimea; descriptions and figures of which have been recently published in the *Gardeners' Chronicle*.

A valuable Memoir, by Mr. Desborough, on the Economy of the *Hive Bee*, as exhibited in the Observatory Hive, was read. This Memoir is a continuation of the Essay which obtained the prize recently offered by the Entomological Society, which has since been published.

Dr. J. E. Gray stated that he had made arrangements with Mr. Janson for the preparation and publication of a working Catalogue of *British Coleoptera*; and that the British Museum had secured the whole of Mr. Wollaston's collection of Madeira Coleoptera, consisting of the type specimens described and figured in his fine work recently published.

HORTICULTURAL SOCIETY'S MEETING, APRIL 3.

ERIOSTEMON SCABRUM.

THE next best greenhouse plant at this meeting, after *Acacia Drummondii*, was *Eriostemon scabrum*. The shape, the close growth, and the profusion of flowers on this plant, were never excelled in public by any one in my time. It was sent by Mr. Charles Hall, nurseryman, Park Hill, Brixton, a name I never heard before; but if Mr. Hall would but go on according to this beginning, time would bring him up to the top of the prize-lists. I assert this with the more confidence, because he is a stranger to me, and from another old prophesy of mine, in which I said the same thing about the Messrs. Fraser, of Lea Bridge, five years before they had beaten Mrs. Lawrence. This plant of *Eriostemon scabrum* might be a yard high above the pot, and thirty inches across over the pot; nearly a perfect cone, but not so sharp at the point as some gardeners make their specimens. Any plant which is not brought up with one central leading stem should never end at the top in a mere point. There is a law, founded in nature and sanctioned by practice and experience, which says, that all evergreen bushes, shrubs, or trees, ought to be widest across the very bottom shoots, and for this reason, that unless they are so, the wider branches over them will hide the lower branches from the sun, and shelter them from the rain, or from the syringe, and thus cripple them, causing failure and decay where the plant ought to be best clothed. But all this does not necessarily tend to make a peak or sharp point at the very top; far from it. Look at a well-trained Laurestinus, or a Portugal Laurel, or an Alaternus, with their broad, massy tops and widest bottoms, and if you see them as I do, you will own that art went hand-in-hand with Nature to make perfect natural specimens of them. But look at that variegated Holly, or the American Arborvitæ, by the side of it, or the Irish Yew, a little further on—did you ever see such "frights!" All of them with *bumbelly*-like heads as broad as they are long, when each of them ought to end in a single point from a leading centre. And why? Just because that is the way in which Nature designed them to appear to please you; but through neglect, or bad taste, they have been allowed, or coerced, to assume an unnatural shape or aspect. That is, therefore, our "sampler" to teach others not to force against Nature when they are pruning and training plants for public exhibition. Follow Nature, but do not twist her, and never pull her up by the nose to make a peaked point for a pyramid, and then go about the country and call it "a specimen" plant.

BORONIA TRIPHYLLA.

The third best grown and flowered greenhouse plant was a *Boronia triphylla*, sent by Mr. Taylor, gardener to J. Coster, Esq., Streatham; this, also, was very naturally trained. Those beautifully-grown plants, and a fine bloomed *Azalea indica Smithii*, from Mr. McEwen, gardener to the Duke of Norfolk, were singled out by the Society's butler and gardener, so to speak, to set off the dessert-tables. Butlers and gardeners must accommodate each other, or ought to do so, in the matter of selecting plants, flowers, and vases, &c., to hold them on the dinner and dessert-tables. This is the fashion among the great in the country. A dinner may be good enough for a half-famished party from the Crimea, or even for common appetite; but without flowers, or some flowering plants on the table, it is not fashionable to "ask" great people to dine. To our great comfort, the Society are now getting into the same high notions, and they pick out the best specimen plants to "furnish" the tables on which they place fruits and vegetables; and if

my reports do no more good than to spread the fashions,—good fashions recollect,—everybody ought to read them in such times as these.

From the Messrs. Henderson, Pine-Apple Place, we had a collection, or rather a selection, of excellent greenhouse plants, for the wits of young gardeners, such as *Dilwynia pungens*, *Boronia triphylla*, *Boronia pinnata*, both finely done. *Acacia squamata*, with globe flowers and no leaves, properly so-called, but short, blunt spine-like bodies instead. This is a low much-spreading bush, well adapted for such specimens as amateurs ought to aim at, and a scarce *Acacia* in the show-room; for this is the first time I saw it in public. A white flowered seedling, *Pimelia* of good aspect; *Eriostemon intermedia*, four-feet high, well-branched, and equally well-bloomed. Every little greenhouse, however small, ought to have all the *Eriostemons*, as anybody can grow them, and they could soon give a taste for more difficult plants; *Hovea pungens* to wit, which was the next plant, and with rich blue flowers; this and the *Dilwynia pungens* are two of the most difficult to do well; *Pultenea subumbellata*, in very good order; this, also, requires good training, and much stopping to bring its straggling habit into a decent form.

HIPPEASTERS.

Messrs. Henderson had a seedling *Hippeaster* with a wrong name; but since Colville and the Loddige's are gone, I do not know a single nurseryman in the three kingdoms whom one could trust to name a *Hippeaster*. This was called *Aulicum reticulatum*, denoting that it was either a first or second cross from the two named species; but there was not one drop of the blood of either of the said species in this flower. It is one of the many crosses of *Vittata* by the pollen of *Equestre*; and it is three-parts white from the mother's side, with the rich green eye, and the bad orange-red of the father, as distinctly as if this genealogy was written across the petals, as, in fact, it is by nature; but who can read her! Unfortunately, the strain of *reticulata* is extremely scarce, and *reticulata* itself has been lost, I believe, for more than twenty years; at least, I failed to procure it all over Europe some years since; it was a tender stove bulb, with purplish-crimson flowers, and a large white eye; no other bulb in the world is of that very stamp; it is figured in the *Botanical Magazine*, vol. xviii. plate 657; but the colours are gone, and the drawing gives no idea of the beauty. There is a variety of it still in cultivation, with a white band down the middle of the leaf; but it is extraordinarily difficult to bloom, or else it must be of great age before it will bloom at all.

There was another seedling *Hippeaster* from Mr. Snow, gardener to the Earl de Grey; a most desirable kind on two accounts: the first, that it is deliciously sweet in a scentless family; the next, is the habit of the leaves coming up half-height simultaneously with the flowers; not very usual in this group; besides, the colours are lively, a soft shade between scarlet and crimson, the mid-rib of each petal banded narrowly with white, denoting a descent from *rutilum*, by some variety of *Johnsonii*. Every amaryllis-like flower, with a white band in the middle of the petal, is some variety of *Johnsonii*. The oldest of all these crosses and *Johnsonii* was got between *Regina* as mother and the pollen of *Vittatum*. The name of Mr. Snow's seedling is *Stephenia*, which is much better than such names as attempt to explain the cross in a group which few understand.

TREE PINK.

I never saw a "Tree-Pink" before, but of all the trees among Cloves, Pinks, and Carnations, this seemed to me to be the easiest to grow well, on account of its bushy habit; in fact, it is a *large shrub* rather than a

tree, following up the idea of Tree-Carnation. It was sent by Mr. John Wadson, florist, Albion Road, Hammersmith. This is just one of those useful plants which is so far out of the common run as to make it very acceptable to the one-greenhouse amateur who can have it in bloom by the end of March. It was a two-year-old plant, twenty inches high, and nearly a foot across the bottom, full as it could stick of bloom-buds, and six or eight of them open; a nice white pink with a purplish bar across the bottom of each petal. Whether all Pinks could be grown into "trees" or large shrubs, I do not know; but I should like one of those for myself, as being so much out of the common, and yet of the commonest thing in the garden.

THE SOCIETY'S PLANTS.

There were two plants of *Thyrsacanthus rutilans* from the garden of the Society, with *Muraltia*, alias *Polygala stipulacea*, that never fails to bloom in winter; a *Boronia tetranda*, a fine plant. The *Sciadocalyx Warzene*, a stove *Gesnera* to all intents and purposes; *Trymalium Odoratissimum* which they "do" better than all England put together, and lots of *Begonias*, among which I noticed a foreign cross from *Manicata* called *late-virens*, which I would prefer to the species, as being so much larger in all the parts about the flower, and smaller in the leaves. Between Her Majesty's garden and this Society, the *Begonias* will soon be as fashionable as Orchids and Geraniums.

ACHIMENES.

There was another cross from Messrs. Veitch which took my fancy; it was a seedling between *Achimenes hirsuta* and *picta*; the name is *gigantea*, because *picta* is made so much bigger by *hirsuta*. This cross shows what we all ought to have known ever so long—that *Achimenes picta*, like *Fuschia serratifolia*, is capable of giving a race of winter-flowering plants by a judicious plan of crossing in and in till the winter habit is established from *picta* on a sure basis.

CHINESE AZALEAS.

Mr. Toddman, gardener to Mrs. Buckmaster, sent six well-bloomed *Chinese Azaleas*, of which *Fulgens superba* and *Coronata* were the highest and best coloured; and Mr. Wood, gardener to G. W. Norman, Esq., of Bromley, sent another lot, but smaller plants, which were just such as amateurs in a private way ought to aspire to. Those large bushes at the May or June shows are more likely than not to dishearten amateurs altogether; there they shoot beyond the mark; but Roses, such as those from Mr. Francis, and these Azaleas from Mr. Alnut, hit the bull's eye exactly in the middle. But gardeners are not the only parties who forget the really practical in the practice of their art; look at the Baltic fleet for last year, real "specimens" in their ways, but not practical for the purposes required. The present Judges for this show had all this before their eyes, otherwise, would they have given the best prize to the smaller Azaleas in preference to those big, flat, and florid ones from Mrs. Buckmaster?

PELARGONIUMS.

There was one collection of forced Pelargoniums from Mr. David Cox, of Manor House, Ham, not far from here; they also were of the right size and stamp for the amateur. *Alba multiflora* was the best grown and bloomed of the lot; this being the only Geranium which no heat can spoil. *Silene* was the next best of them, a lively red flower. *Gauntlet*, a good flower, as I often said, but not a good habited plant, the worse luck. One, called *Mrs. Johnson*, is a good forcer, but is too common

in looks; and *Bloomsbury*, a real Covent Garden-looking flower, as Covent Garden used to be supplied twenty years ago. But now, if you want to see real good gardening, you ought to go to Covent Garden for the sight.

HYACINTHS.

There was one dozen collection of well-bloomed Hyacinths from Mr. Cutbush, of Highgate, in which the black metallic lustre of *Prince Albert*, and the nearly scarlet *Cavaignac*, were the most conspicuous. The latter is a great improvement on the old scarlet Hyacinths, and there is a light shade down the middle of the petals which adds to the distinctness of this kind. Two more new kinds were in Mr. Cutbush's collection last month, and the four names ought to be memorandized for next autumn by those who do not yet possess them. Every one ought to note down all the improvements which I and the rest of us notice in our weekly articles, whether he intends buying or not. To be able to discourse about this and that, in every department of gardening, is the surest way of impressing your friends about the value of "such a head" as you have got.

MISCELLANEOUS.

There was a collection of stove and greenhouse plants from Mr. Davies, gardener to E. Rosher, Esq., Hamilton Terrace, St. John's Wood, in which was the white-berried *Ardisia crenulata*, a very marked plant in contrast to the red-berried kind, which was there also; a *Rhododendron Javanicum*, with three heads of bloom; a *Croton variegatum*, *Eriostemon nerifolium*, and others; by the side of these was a fine plant of *Phrynium sanguineum*, from the Pine-Apple Place Nursery. This was a fine plant, with several spikes of its light scarlet flowers. It is a little known genus between *Maranta* and *Canna*. The plant has a long reed-like stem, then branches out into *Canna*-like leaves, which are greenish-purple, and upright long spikes of scarlet flowers, after the manner of *Maranta*.

FRUIT.

GRAPES.—There was only one dish of *Black Hamburg* grapes, and that from Mr. Allport, gardener to H. Akroyd, Esq., of Doddington, near Nantwich. They were a good sample, highly-coloured, and obtained a prize.

PEARS.—Mr Tillyard, gardener to the Right Hon. the Speaker, at Heckfield, is the luckiest Pear-grower in the country. He had the very best samples of them at every one of the meetings we have had since Pears came in last autumn; and it often struck me, that the Speaker ought to have a basket of such Pears in "the house," to stop the mouths of such members as speak a great deal about things of which they know little or nothing. Either those Pears, or a few bunches of such *Asparagus* as Mr. Solomons exhibits from Covent Garden, would effectually stop the mouths of the green Coffee-berry gentry for the rest of the session. Mr. Tillyard showed six *Easter Beurré*, twelve *Beurré Rance*, fifteen *Ne Plus Mewris*, still very fine, and fifteen *Knight's Monarch*. I moved for leave to bring in a bill for tasting one of the latter after the meeting was over. This motion was seconded by the Speaker's own gardener; but the preamble was either not proved, or was out of season for tasting the *Monarch* Pear, and I lost the chance. I never tasted *Knight's Monarch* after the middle of March; but Mr. Tillyard declares it to be a better Pear than *Beurré Rance*, and will keep as long.

Mr. Hill, gardener to R. Sneyd, Esq., of Steele Hall, Staffordshire, sent nine of the finest *Beurré Rance* Pears that any of us had ever seen, and Mr. Hutchenson, gardener to H. Harrison, Esq., of Aigburth, Liverpool, six *Beurré Rance*, six *Knight's Monarch*, six *Ne Plus*

Meuris, and six *Easter Beurré*; these four kinds, therefore, may be put down as our best late Pears.

APPLES.—Mr. Hutchenson also sent four kinds of very good dessert Apples; but they were not so “fresh” as they want them in London for exhibition. They were the *Cockle Pippin*, *Golden Harvey*, *Syke House Russet*, and *Nonsuch*.

STRAWBERRIES.—The very finest *Keen's Seedling* Strawberries I ever saw so early were from Mr. Turnbull, gardener to the Duke of Marlborough, at Blenheim. I am near enough to the mark, when I say that they were as good-looking as any that were shown last July at the Regent's Park, which was the finest show of Strawberries I ever saw. Mr. Snow, gardener to the Earl de Grey, had the next best *Keen's*; but Mr. Ingram, from the Royal Gardens at Windsor, beat them with his own seedling, called the *Prince of Wales*. This was the second occasion, I think, on which Mr. McEwen, from the Duke of Norfolk, took off the palm with pot Strawberries. He also had a beautiful dish of mixed Strawberries. Mr. Brown, gardener to John Parnell, Esq., of Waltham Abbey, had a good dish of *Keen's*; and Mr. John Flemming, gardener to the Duke of Sutherland, at Clevedon (not our friend at Trentham) sent six pots of *Cuthill's Black Prince*, to show that it is *entirely* unfit for forcing. Others say as much, while many find it the most useful of them all for early forcing. I believe, I was the last in England who successfully grew the *Downton Strawberry*; but after trenching that bed, I could never grow it again, and I believe that Mr. Ingram himself could not grow a row of the *British Queen Strawberry* in the kitchen-garden at Shrubland Park. I could fill a book with such exceptional cases, in all branches of gardening, on which science has not yet sent a single ray of light.

PINE-APPLES.—They were good and numerous; but, strange to say, Mr. Jones, gardener to Lady Charlotte Guest, one of the very best Pine-growers among us, sent a fruit full three weeks behind its time. The bottom pips were as black as my hat, and not fit to eat; and Mr. McEwen, another of our very best gardeners, sent a fine Pine in full prime, but with a deformed top. We had, also, one dish of *Sea-kale*, from another first-rate gardener, which was hardly worth putting in the pot, “such miserable little bits.” These are sad drawbacks to the pride of an old gardener. The first prize was taken by Mr. Thomas Bailey, Shardloes, with a *Prickly Cayenne*, 4 lbs. 4 ozs.; the second by Mr. McEwen, with a *Smooth-leaved Cayenne*, 3 lbs. 8 ozs.; and the third by Mr. Brown, Waltham Abbey, with a small *Moscow Queen*.

CHERRIES.—Mr. Shuter, gardener to the Earl of Wilton, at Heaton Park, north of Manchester, sent a good dish of *May Duke Cherries*. Heaton Park is the only place about Manchester which I did not see in 1832.

RASPBERRIES.—Mr. McEwen, of Arundel, exhibited a specimen of perfectly-ripe fruit of *Rivers's Perpetual Raspberry*, the first forced Raspberry I recollect before the Horticultural Society. The first I had seen was at Powis Castle, in 1830, along with *Gooseberries* and *Currants*, together with *Star Apples*, *Litchi*, and *Longhan*, and many other tropical fruits in the same house!

FOREIGN PRODUCTS.

The foreign Pears and Apples from Mr. Solomons eclipsed all our kinds. His Tomatoes and Cardoons must come from Algiers, if not from the Gold Coast; but his *Oxalis crenata* roots were not a tenth so good as I had them near Sudbury twenty years ago. His foreign Potatoes might yield more starch, if they were grated for the purpose; but they were not a whit better than those from the Duke of Norfolk, by Mr. McEwen; nor much beyond those from the Speaker. The foreign Salads beat us altogether, the *Lettuces* and *Endive* par-

ticularly, and perhaps the early *Carrots*; but we force *Chicory* (*Barbe de Capuchin*) much better than the French; but perhaps their “notions” are so much different from ours. We also bring the *Mushroom* to as great perfection as the French, in many of our private gardens. Mr. McEwen and Mr. Tillyard had as good Mushrooms that day as Mr. Solomons.

VEGETABLES.

For the information of young gardeners, I may say that *Mushrooms* should not be publicly exhibited after the film which hides the gills from below is rent or open. One that measures two inches from edge to edge across the gills is a very good size; if it is wider than this, without being thicker in proportion, it is not a bit better for the extra width. Like Potatoes, or Strawberries, every Mushroom in the dish ought to be as near of a size as possible; six great *loppy* ones, with eight fine, and twenty little buttons, would disgrace an apple-woman were she to send them all in one dish. They never want to see “buttons” of Mushrooms at these exhibitions; because they are sure to come, if you watch them, before the big ones. No matter how large the Mushroom is, the film ought to be perfect, and on removing it, the gills ought to look fresh and of a pale pink colour; if it is the least black the cholera is in it, or some other poison.

Mr. McEwen took the first prize with forced vegetables; say, *Potatoes* and *Mushrooms* very fine; *Sea-kale*, *Kidney Beans*, and *Asparagus*, all very good. Mr. Tillyard was second, with excellent *Mushrooms*, *Cucumbers*, *Rhubarb*, *Potatoes*, and *Sea-kale*; and Mr. Brown sent a good sample of *Peas*, the sort called *Sutton's Early Emperor*.

HOP TOPS AND ROSE TOPS.

These were in Mr. Solomons' collection from abroad. These are little white sprouts, an inch-and-a-half long, taken from under the surface of the ground when the plant begins to grow. Of this kind of vegetable the best I know is the young tops of the Wild Rose in our hedges. Before the shoot is four inches long, and before a flower-bud is formed, an inch or two of the succulent part is nicer than *Asparagus*, but not of that flavour; ten minutes will boil it, and a little white sauce to dip them in is all the preparation for them. I have often partaken of this dish; but I never tasted these “hop tops.”

D. BEATON.

GREENHOUSE VINERY OVER A SHED.

“I AM desirous of erecting a stove or greenhouse at the rear of my house on a space elevated fifteen or sixteen feet *above* the ground, and shall take it as a great favour your giving your opinion upon the same. If my plans are correct, or can be improved upon, any suggestions you can make will oblige. The purposes to which I wish to devote the glass structure are for growing Vines trained to the roof inside the house, but these to be planted on the *roof* of a building, the earth to be eighteen inches deep, and of what length and depth you think most proper. I intend the soil to be placed in a vat, or shallow box, raised above the roof on blocks, and lined with zinc or lead, *with or without holes*, or otherwise the vat, well pitched or coal-tarred, and placed on the roof of shed. I intend to have an inclined bed of earth on which to grow, say Pines, the same inclining towards the shed, which is to be the front of the house; but at nine feet from which is my next door neighbour's house, towering ten feet above the floor of my intended structure; the space, eleven feet, six inches, and also sloping towards the door are the walls of my house, two stories higher than the *floor* of the intended green-

house; the end is open to the street; the winds at present have full play over the space where the roots of the Vine are to be planted. I wish to have arches, or places, under the pit, or space for Pines, in which I wish to force Sea-kale, Rhubarb, and Mushrooms. What space ought I to allow for them? also, what depth ought the pit to be in soil? I intend the front of the house to be five feet, one-half glass, the other brick-work, four-and-a-half inches thick; the height of the house at the back to be eight or nine feet. I wish to place shelves, on which to grow Potatoes, Mustard and Cress, Lettuce, Radishes, or anything you can suggest, to be fixed to the walls of *my dwelling*. At what distances ought they to be placed, and how wide must they be not to shade each other? At the end I should have, say three feet brickwork, the remainder glass. I am not decided about heating, whether by gas or stove. Glass to be Hartley's Rough Plate throughout.—DONTON."

I would give prominence to the above letter, because considerable intercourse with amateurs with limited means enables me to know that the aspirations of the writer are shared in by multitudes, and whose enthusiasm is apt to be damped, if not destroyed, because they have failed from attempting what, in their case, was next to the unattainable. There is an old adage, "that the person who strives to get a silk mantle will, in all likelihood, be at last rewarded with a sleeve of the desired material." Attempt nothing, and you will realise nothing, is a maxim that cannot be disputed. And yet, with a numerous class of enthusiastic gardeners, the want of gaining desirable results is oftener owing to the attempting too much, rather than the attempting too little. I have every sympathy with them, because I have generally been placed in a similar predicament, and I know how anxious a lover of vegetable nature is to squeeze as much variety as he can into his house, or garden, of some ten or twenty feet square. Were I to tell him that he is likely to succeed with a variety of things, each demanding a different treatment, I should only be leading him astray. True, a noble enthusiasm may receive a slight check; but it is better that the remainder be right directed, than that the enthusiasm should be lessened by disappointment, or changed altogether into rooted aversion.

The above letter is just a sample of the sanguine enquiries often presented privately, and it does often grieve to be forced to say *No*, when it is perfectly evident a confident *Yes* is expected. Now, we must say *No!* to Mr. Danton, so far as he expects to grow Pines, and Grapes, and Potatoes, and Rhubarb, and Sea-kale, &c., in a small house so circumstanced as he has described, and expect to succeed with them all.

We are not told on what this house is to be erected some sixteen feet above the ground level—we presume on the top of some level-roofed building between the mansion and the shed. We see that the back of the hothouse will be against the dwelling house, eleven feet six inches in length, where it joins a diagonal line of dwelling-house, E.S.E., until at the width of eight feet, and the opposite end being to the back square; the length of the house would be seventeen feet four inches. It will therefore be evident that the whole of the light for the house must be admitted at the W.N.W. end, open to the street, and the front side facing S.S.W. But nine feet in front of this is a neighbour's house, ten feet higher than the floor of the hothouse, and, I presume, five feet higher than the front of the house, and one foot higher than the highest point at the back. The W.N.W. end is at present open, but that would tell but little upon the house, in comparison to the light that shines upon the front; and this would be much shaded during the dark months of the year, when the sun is low in the horizon, at the time that tropical plants, such as Pines, would require every possible

ray. The sun, for months, would never strike directly the front of the house at all, and, therefore, if in such a place Pines should be grown, they would succeed better in a sloping bank near the back of the house than towards the front; and if the back of the house was raised a couple of feet or so, more light would be admitted; and if the sashes were not moveable, ventilators could be placed in the sharp angle of the roof.

Convenience of such a House.—The door, no doubt, may be placed in the most convenient place; but how are you to get at it. Is it to be over the top of the shed, by ladder, or how? I fear, if such is the case, you will soon tire of the house, from the mere labour and fatigue involved. A plant-house at such a height could only remain a pleasurable affair by having a direct communication with the dwelling-house.

Heating such a House.—However you heated, whether by gas or stove, you could scarcely manage such plants as the Pine without bottom-heat, and for this hot-water would be best. Now, at the very least, you would require two three or four-inch pipes below the bed for bottom-heat, and two round the w. end, and along the front, for top-heat. Now, as the cheapest plan would be to place these pipes in rubble, and the soil above, we will just glance at that plan in unison with your contemplated arrangements.

The Pines would require a space of at least three feet from the soil to the glass, and eighteen inches of soil. With a height of five feet in front, this would give you little room for pipes and rubble over them; but as the back of your pit would be from seven to eight feet to the glass, the heating medium might be nearest to the back, though even then there would scarcely be room for arches for any purpose. Supposing, however, you had set your mind upon Pines, and that they might obtain the most light you could give them; had consented to have your bed at the back of the house, say four feet wide; and then, if disposed, you might raise your bed on arches nearly two feet high in front, and higher behind, say three or four arches for the house; the bottom-heating pipes could pass through the crowns of such arches, and you would have space enough above, after packing the hollows of the arches, and around the pipes with brick-bats, to have eighteen inches of soil, and about three feet above it to the glass in front of the bed and more behind. This would accommodate two rows of Pines. If the arches in front were furnished with wooden lids, and young, fresh Rhubarb plants were used, you could easily, from well-grown roots, obtain a good supply of Rhubarb and Sea-kale, Chicory, &c., so long as the temperature in the house did not rise above from 55° to 60°. With a path twenty-four or twenty-seven inches wide, you would have room for a useful shelf in front, from eighteen to twenty-one inches wide, or that might be reserved for another pit, or boxes of that width for Vines, and a shelf might go over them all the same. By this plan you would require no shelves on the walls of your house, unless, perhaps, a very short one near the doorway.

Growing Radishes, Potatoes, Cress, &c., in such a House.—According to your proposed plan this would be impossible. By keeping a temperature not above 55° in winter, you might manage a few Potatoes in pots and boxes, but above that temperature, and without plenty of air, you would assuredly fail; the Potatoes getting weak and insect covered, and the Radishes growing all to top. Cress would soon come to the cutting state in such a place, but would require to be used almost directly. Now, where such a mixture of Vines, Pines, Potatoes, Radishes, Sea-kale, &c., are desirable, and a little extra expense no object, all this might be done in the following way:—

Have the pit at the back from three-and-a-half to four

feet wide, as suggested; a path of as many inches more than two feet as you can spare. In front of the path have another four-inch wall, or better still, stout one-and-a-half or two-inch boarding, so as to form another pit between it and the front wall. Perpendicular to this board, or wall-plate, fix another board close to the glass, longitudinally, and wide enough to clear all the sash-bars or rafters. You thus obtain a sill, and a wall-plate for the back of your front pit, and you may fill up the space with sashes, either to open or slide past each other. Supposing that the front sashes of your house open outwards, over the shed, you have thus a front pit, and a back pit, and pathway, which you can easily and separately keep at the temperature you require. For this purpose, the heating medium should be *entirely* in the back department. The top and bottom-heat may be effected separately, as often described. If it is intended to keep the place permanently for Pines, &c., or even Cucumbers, Melons, or tropical plants, the better for bottom-heat; it would be more economical to take two pipes along the path, or on the surface of the bed, supplied with evaporating-pans for top heat, and return them to the boiler, above and through the arches for bottom-heat. By having the inside sashes of the front pit shut, the temperature there, by opening the outside sashes, may be regulated to a nicety. When a higher temperature is wanted, slide the partition sashes, or part of them, and the temperature of both parts of the house will approximate. It would be well to have these sashes moveable, that, if desirable, they might be taken away in summer. It would be also desirable that at least the upper half of these partition shutters or sashes should be glass, so as not to lessen the light greatly from the bed behind. While the Pines, therefore, enjoyed a temperature of from 55° to 65°, and onwards, the front division might be 10°, 15°, or more degrees lower. Even this front part might be in two or three divisions, longitudinally, by cross partitions, and the temperature regulated to a nicety by moving the external and divisional sashes.

Making the most of such a House.—Now, let us glance for a moment how a keen amateur may make the most of such a combination. Sea-kale and Rhubarb are most valuable in the shortest days, the darkest and duldest weather. Unless there are Pines swelling off, it will not be advisable to give an artificial temperature above 60°, rather below it; and so long as that is the case, the space under the arches being also under the heating medium, will seldom be above 55°, and nothing could suit better for these two vegetables, merely placing the roots in a little fine earth. Asparagus may also be procured in a similar way. When nearly fit for cutting, open the wooden-door in front of the arch, to let the light in, and then, to green it still more, let it stand close to the glass in a saucer, with a little water in it, for a day or two, before sending it to table. Chicory would also blanch beautifully in such a place. Mushroom-rooms would also do well in winter. Many flowering-plants could also be securely kept in a torpid, dry state, as Achimenes, Gloxinias, Gesneras, Zebrinas, &c. Here is a box we wish to fill with Mustard and Cress, to be in as soon, and to last as long as possible. The seed is sown, and kept in the dark; as soon as it is up it is set in the passage of the house for a little while, and then one of these divisional sashes is moved, and out it goes full in the light, and in a colder temperature in the front pit. For the use of amateurs, nothing answers better than sowing in small pots, and removing these as soon as cut, and sowing again. Radishes may be done the same way, and they will be as short jointed and crisp as if grown in a frame. They will likewise do well in pots, not less than seven or eight inches deep, and as much across, and in light soil, poor, but with a little dung at the bottom of the pot. As for Potatoes, two sets may

be placed in a ten or twelve-inch pot, and in light, richish soil. These may stand in the pathway, or under one of the arches, until the tops are an inch or two above the soil, and then be removed to the front division, and the temperature lowered by degrees by admitting more air. By April, if desirable, French Beans might be substituted for these; or, if more desirable, such plants as Gesnera, Gloxinia, Achimenes, or low-growing stove plants of any kind. To grow greenhouse plants, the divisional sashes would require to remain all summer.

Supposing that Grapes would form a prominent feature, then this front division would be of great importance. If the Vines are planted inside in front, the heads, after being pruned, may be placed there, and be broken gradually, and when most wanted, If planted outside, as proposed, the Vines could not well be forced early in the circumstance, without a great deal of protection to the boxes on the top of the shed roof, and even if introduced latish, they would be none the better for being at once introduced into a tropical temperature. Now, this small front division would admit of bringing them on gradually, and thus ensure the breaking of the buds regularly. If I could do as I wished, I would have some arrangement of this kind in every Pinery where Grapes also were grown. I have several times had great difficulty in breaking Vines properly, when the Vines were planted close to the front of the house, and the heating medium was also close to the walls, and the Vines could not be taken outside. Such a means of shutting off the Vines from more heat than you wish, as detailed above, is far preferable.

Planting Vines for such a House outside in Boxes.—You have said nothing of how you are going to get at them, raised sixteen feet high on the roof of a shed. With the exception of the trouble involved, and the necessity, from their position, of frequent watering in summer, and thatching the whole over in winter, there would be no insuperable difficulty in the way. I would, however, propose the boxes to be two feet deep instead of one-and-a-half, and from two-and-a-half feet wide and long. Whatever you do, let there be plenty of holes in the bottom, and several inches of drainage before the soil is put in. In such a position, in preference to separate boxes, I would prefer one from two-and-a-half to three feet wide, the whole length, and then divided into divisions for four or five Vines. I do not well know how lead would do for covering such boxes inside; but I know that the roots of plants in general like to cling to zinc. I should also prefer stone-colour paint in preference to pitch or tar for the outside. In the heat of summer, when the sun gets freely over your neighbour's house, you will be pretty well suffocated with the scent of the tar for the first twelve months, and your wood would be almost charred. A non-absorbing heat-colour will keep your wood coolest in summer and warmest in winter. I have known such boxes *pitched* inside, and the plants grow well. What is the experience of others on this subject? Pitch would stand longer, I presume, than zinc. I do not think the latter lasts long, as plants do not like it so well for nothing.

Vines inside instead of outside.—As will have been seen, I do not much admire boxes cocked up on the top of a roof, chiefly on account of the labour they would involve. There might also be a question of the roof of a shed supporting such a weight as such boxes would have when wet. I would much sooner plant them inside, either in separate boxes below the sparred front shelf, or in one long box divided into partitions. They would require, then, much less trouble in watering, could be easily examined, surface-dressed, &c.; for in such a small space success would greatly depend upon surface-dressings and manure waterings, while the roots would be kept in a uniform state and not exposed to

great and sudden changes either in temperature or in moisture.

Desirability of such combinations.—This will depend entirely upon the general knowledge, the peculiar resources, and the particular wishes of the owner. I have known a few such small houses in towns where little wonders were done, and at little cost, because the proprietor could get all his roots of Sea-kale, Asparagus, &c., from a country garden, at but little cost. Many men pride themselves upon having a little of everything; and others delight in letting it be known that they had new Potatoes, Radishes, &c., for their Christmas dinner. They may not have had many then, or since; but they are not so silly as to tell that, even though the impression should prevail—"how luxurious he must be to keep eating and eating every day such dainties." Some years ago, I was praising the Peas in a small garden belonging to a gentleman fond of such jokes. On meeting him sometime afterwards, when my own Peas were yet scarce, and Pea gathering was talked about, "O mine will soon be as hard as flints," said he; leading me to imagine he had gathered dish upon dish. That same day his most worthy and really clever, industrious, honest factotum called. "What about such lots of *hard* early Peas, already fit for nothing but soups," said I. "Well, I thought he would be swaggering," said he; "but you must not let him know that I told you, we have only had one small table-spoonful yet, and must wait a day or two to get more." Unless, therefore, for ministering to a peculiar fancy, seeing and proving what may be done in a small house, and where there is the possession of considerable practical as well as theoretic knowledge, and in unison with these, the time and the opportunity to attend to the wants of the various articles, just when they required attention, it would not be wise policy to attempt so many things in one house. In fact, could all the amateurs in a neighbourhood meet together, and agree to grow only a few things each, but different from one another, and then visit each other when each thing was its best, there would be more real enjoyment of vegetable loveliness, than when, as now, one little house and garden are merely a repetition of some or many others. The great clumsy walls that kept out the sight of the green grass of Hyde Park and Kensington Gardens have been swept away, and the humble pedestrian, as he passes along the highway, can delight in greensward and silver shining foliage; and it is high time that all ugly boundaries of narrow-minded prejudices should be levelled down and cleared away.

Conclusion.—I have given the case of this correspondent this full consideration, because he is just one of a class that the writers in this journal would be most anxious to serve, whether they choose to follow the course they have already contemplated, or are willing to narrow their views, and be content to adopt what experience would point to as a mere prudent one, until, at least, they had gained more experience. In such a small house the whole affair would be much simplified by giving up the *Pines*, and economy in fuel would also be an object gained. Provided the *Pines* were given up, much trouble with the Vines outside would also then be avoided, as there would be plenty of room for a box, or boxes, inside. The floor of the house must be made waterproof, if there is any likelihood of the moisture escaping through and doing injury to the building below. A stage, or a latticed table might go over these boxes, or pit, and thus no room would be lost. These stages might be filled with flowers, and Vines allowed to break nearly naturally; or Potatoes, Radishes, &c., might be substituted for flowers. One flow and one return pipe would be sufficient for this purpose, as during winter a heat of 45° would be sufficient. Either the flow or return, for a part of its course, might pass through a close wooden box; and there Sea-kale might

be grown, but not so quickly as in the arches referred to. Many other purposes and combinations will at once suggest themselves. Whether Vines are placed inside or outside, the perfect drainage must be thoroughly attended to, or the soil will alternately be like slush, or brick, in which such plants will not flourish. If the back wall is raised, there could be a shelf or two above either pit or stage. Our readers, as well as our correspondent, may now judge for themselves. R. FISH.

STYLIDIUM.

It is one of our blessings that our tastes differ. One man or woman delights in music, another in painting, another in writing or studying elegant compositions. Some delight in travelling, whilst others enjoy peace and quietness at home. One collects objects of Natural History, whilst others spend their whole lives in abstruse sciences, and are the deep thinkers of the human family; but all, or nearly all, delight in flowers. Even in this elegant and pleasing taste we differ. Some delight in cultivating the most singular and rarest of plants, the Orchidaceæ, and succeed too; but the greatest number of garden-loving persons like such flowers as are showy in colours and fragrant in scent. There are, however, a few that are best pleased with plants that are small and curious.

As I stated at the head of this article, what a blessing it is that our tastes and pursuits differ. If we all liked one thing, or one pursuit, what a monotonous life we should lead. The mind would be contracted, we should be mere vegetating animals—we should eat, and drink, and die. These ideas may be simple enough, but they have often struck me very forcibly, and more especially in writing about various plants. Orchids, stove-plants, greenhouse-plants, Ferns, herbaceous plants, trees, and shrubs. What an endless variety; it is quite inexhaustible. THE COTTAGE GARDENER has been in existence for more than six years, yet its pages are constantly filled with new matter, and correspondents are as constantly crying out for more information, so that there is every probability that our pages will be filled with desired matter for many years to come.

A question was asked me lately, why the curious and interesting family, the name of which I have placed at the head of this paper, had hitherto escaped the notice of the writers in our weekly COTTAGE GARDENER? I replied, that we were not yet at the end of our pleasing labours, and they might look for an account of them very shortly, for I had my eye upon the tribe. This correspondent is evidently one that has a taste for the curiously pretty in flowers, and no doubt there are some few, or perhaps many, with a similar liking. To gratify, and perhaps instruct, such cultivators, I shall write a paper or two on them.

The *STYLIDIUMS* are of a family of plants chiefly herbaceous, though a few rise to the rank of low shrubs. They are all from that great storehouse of greenhouse-plants, New Holland, and, consequently, require protecting from frost; the temperature should never fall below 40° in winter.

The name is derived from *stylos*, a column. The stamens and style are joined into a column, thus bringing them in affinity with many Orchids which are similarly formed. In fact, Linnæus places them in the same class and order as the *Cypripedium*, or Lady's Slipper, an herbaceous tribe of Orchids.

Description.—To a slight observer, many of the species of these interesting plants look like, when not in flower, some species of heath, or tiny fir; whilst others have the appearance of some tufty grass, or *Statice* (Sea Sorrel). By this description, those of our readers that have not

seen any of them will have a tolerable idea what they are like. The flowers are produced in spikes; they are mostly small, but very pretty, and of various colours; chiefly pink, rose, yellow, purple, red, and white.

Some of them are very tiny objects, not more than four inches high, whilst others reach the height of a foot-and-a-half; one species is *scandens*, or climbing. The most curious part of these plants is the irritability of the stamens. These hang down, and when the pollen is ripe, and ready to be discharged upon the stigma, they have the power to spring up and scatter the fertilizing powder, so as to fructify and produce seeds. I have watched them for a considerable time, but never noticed this action spontaneous; a breath of wind, or a touch of an insect, seemed to be necessary to produce the effect. One species (*S. recurvum*), I have observed to be more irritable or more easily excited than any other. I have taken a pot of it, when in full flower, and let it drop rather smartly upon the stage of platform; the stroke almost invariably caused five or six, or more, of the stamens to jump up like as many sporting Jacks-in-a-box. It was a curious and very pleasing exhibition of the wonderful way in which Nature effects her purposes. This curious phenomena may also be effected by touching with a pin the stamens of any of the species that are not so easily set in motion as the one I have mentioned. In *S. graminifolium* the anthers and stamens are comparatively large, and, consequently, this curious and surprising irritability is more conspicuous.

The Messrs. Henderson, at Pine-Apple Place, possess a great number of the species of this tribe. I have, many times when I was there, had the pleasure of giving great enjoyment to visitors, by showing them the wonderful machinery of the flowers of these curious plants. I never met with a visitor who was not greatly pleased and interested with this exhibition of means to an end and for a purpose. If the plant had not been gifted with this power, the situation of the pollen would have prevented the plants from perpetuating their race by the production of seeds. The flower itself, though so curious in its mechanism, is not what is called showy; but examined by a microscope of moderate power it is exceedingly beautiful.

I may here state that the plants are not expensive; some species are as low as 1s. 6d. each, and others 3s. 6d. The latest introduced species, *S. mucronifolium*, is the only dear one—it is 10s. 6d.; but will, no doubt, soon be much less, when propagated in numbers.

I trust, from the above very brief description, that I shall excite every lover of plants that has a greenhouse, to endeavour to procure a few of the species of these interesting plants. I assure such persons that they will never regret the expense of procuring them. When in flower, they will be a constant source of pleasurable enjoyment. I can also assure them that they are not difficult to grow, may be easily propagated, and will thrive well in a small as well as in a large greenhouse. For their culture, and a list of species, I must beg a little indulgence till my next paper on the subject.

T. APPLEBY.

(To be continued.)

ADVICE TO YOUNG GARDENERS.

(Continued from Vol. XIII., page 492.)

VISITING EXHIBITIONS.

IN my last paper addressed to my younger brethren, I pointed out the advantages of visiting gardens and nurseries. I now propose to recommend them to inspect, also, occasionally, exhibitions of the products

of the garden at the various Horticultural Meetings, but more especially those at Chiswick and the Regent's Park. There they will see plants and fruits grown to perfection. I am quite sure no gardener worthy of the name could inspect such excellent productions without feeling desirous to improve his own productions at home. He would also there see the best of the new plants then in flower, and could judge of their merits. He would also meet with many gardeners, some of the best in the kingdom, and might converse with them on the various improvements now in progress.

I have always strongly recommended gardeners, in various parts of the country, to visit London for a few days when these exhibitions take place. A little extra exertion to get his work so forward as to allow this time, and a little extra carefulness of his means, should be put into practice by each gardener for a few weeks previously; which pains and care would be well bestowed for this purpose.

I have, also, whenever I had the opportunity, pressed upon the gardeners' employers the great benefit and improvement, to say nothing of the pleasure, their gardeners would receive if allowed the time and opportunity of (at least once a year) seeing these great metropolitan exhibitions. I know many, very many, gentlemen, who very liberally not only allow their gardeners to see these examples of horticultural skill, but even give them tickets, and pay their expences. This is very praiseworthy, and I am sure such liberality redounds to their advantage, by raising in their gardener's mind a desire and the knowledge to excel.

By way of contrast to such liberality, I know, also, there is an evil, or rather a misconception, often attends on such exhibitions. Some gentlemen, seeing fruits and plants so superior to those they have in their own gardens, go home dissatisfied with their gardener, and charge him either with neglect or with unskilfulness. Let me respectfully state to such gentlemen, that they should not only visit the place where the fruit or plants are exhibited, but also the place where they are grown. The expences of such plant-exhibitors as Mrs. Lawrence, Mr. Colyer, and others, are very great indeed. They have large houses expressly built to grow those grand specimens. They allow their gardener every thing he requires in plants, in proper soils, in proper pots, and plenty of assistance. Nothing is spared. Then, again, in growing fruits at such places as Her Majesty's Gardens at Frogmore, as the Duke of Sutherland's at Trentham, as the Duke of Marlborough's at Blenheim, as the Duke of Norfolk's at Arundel Castle, as Sir John Cathcart's at Cooper's Hill, and various other places, from whence such fine plants are sent to be exhibited, no expence is spared of money or labour to bring the fruit to the highest condition.

If a gentleman wishes his gardener to produce first-rate plants and fruits, he should allow him every needful means, both in materials and assistance in labour. To expect a man to excel without means is unreasonable.

In the matter of exhibitions, this year, 1855, will be a remarkable one. The Crystal Palace Company, advised, no doubt, by Sir Joseph Paxton, have issued advertisements and high prizes in schedules, for an exhibition to be held in the Glass Palace at Sydenham. The prizes are so liberal, that they are sure to bring forward all the best plants and other garden productions in the country. Every gardener that can by any means so manage should be there. I may venture to say, there are many hundreds of gardeners that have not yet seen the wonder of the age, the Crystal Palace. They will not only see the finest productions of the gardens, but they will have the opportunity of seeing the Palace itself, with all its beautiful contents—works of art and science, almost without number. If any one fifty years

ago had prophesied that such a display of every thing grand and imposing would ever have been seen in Great Britain, wealthy and progressive though this country was then, he would have been thought a dreamer and a madman. Let, then, every gardener strain his utmost powers, by putting his garden into such order, that he may be spared a few days to enjoy this great treat.

I have now to mention and make a few remarks on gardeners exhibiting. Some ladies and gentlemen take great delight in exhibiting their plants by way of encouraging their gardeners, and others do not. This is purely a matter of taste. A gardener may grow his plants well, produce also fine fruits and vegetables, and yet his employer may object to that gardener exhibiting them. No reasonable gardener will say this is hard usage. The productions of any one's garden are absolutely his own. His gardener's skill and time he pays for, and, therefore, has an undoubted right to have entire control over both; and the gardener that has a good place would be very foolish indeed to find fault with his employer, because he refuses to allow him to take his plants or fruits, however excellent, to be exhibited. Though to exhibit excellent products of the gardener's own growing, and to win prizes therewith, is both pleasant, honourable, and, perhaps, profitable, yet it is not done without great trouble and expence, and often engenders ill-feelings amongst the exhibitors themselves. But then, again, where all parties are agreeable, and success achieved, exhibiting fine productions is exceedingly pleasant and improving. I see, during my various journeys, many country exhibitions, and I have been highly gratified in most places with them. I see gardeners, near neighbours, exhibiting against each other in perfect fairness and good-will. At one show, one will be first; at the next, another will be first; and it was very pleasant to behold such competitors meet after the exhibition in perfect good-feeling, satisfied that the judges have acted fairly, or, at least, according to the best of their judgment, with which judgment such right-thinking exhibitors have been contented. It is true, I have met with exhibitors that have acted differently; but such, I am happy to state, are rare; they are the exceptions, not the rule. In my own opinion, I think exhibitions are of the greatest benefit to gardening, to the owners of gardens, and to gardeners generally; and I hope to see all parties connected with gardening uniting together in societies, and thereby advancing this useful and pleasing art in every corner of the empire.

T. APPLEBY.

(To be continued.)

NOTES FROM PARIS.—No. 10.

UNIVERSAL EXHIBITION.

THE preparations for the coming Exhibition here, and the architectural alterations in progress, involve the consideration of matters related more or less directly to horticulture. I think, therefore, that a short notice of the improvements going forward, as well as of the arrangements in preparation for the grand Horticultural and Agricultural Shows, cannot fail to be interesting to your readers.

For several months, this summer, we shall have within the barriers of the French capital contributions in vegetable products of every description; fruits, flowers, plants, and seeds, used in the arts, manufactures, and medicine, in the kitchen, the drawing-room, the garden, and field, whether for food, utility, or ornament,—contributions not only from every department of France, so favoured with a fertile soil and a fine climate, but from warm, sunny lands far beyond the Alps and the Pyrenees. Besides the produce of the soil, we shall have innumerable implements, machines, and

instruments, suitable for facilitating and abridging manual labour. There will, doubtless, be many things suggestive of different methods, or better practice. In any case, we shall have opportunities of comparing the products of other countries with those of our own; and though the conditions cannot be equal, except in a limited range, the results must be beneficial to all.

There may not be such another gathering for many a day; and a faithful record of its varied features, phases, and incidents, will be required by those who now are far removed from the scene of its existence, or those who will only hear of it long after the elements of which it is to be composed have been scattered or consumed.

Let us search the records of the Great Exhibition of Hyde Park, and we shall find glowing accounts of statuary, furniture, drapery, and instruments of all kinds; we shall find elaborate dissertations on locks and revolvers; on turn-out beds for heavy sleepers, or fancy cradles for infant princes. All this is just as it should be: but where shall we look for a good account of the vegetable products of the other countries, as exhibited under the roof of the first Crystal Palace? The collection of Messrs. Lawson, of Edinburgh, was all that could be wished; but there were several small foreign collections of value which scarcely received notice, and were only shortly enumerated in the official catalogue. What added to the interest of Messrs. Lawson's collection, and gave it a great advantage, was the fact that an excellent descriptive catalogue of the different objects exhibited was published by these enterprising gentlemen, and the public had, therefore, the means of making themselves fully acquainted with every particular. But the other exhibitions of the same kind, such as the collection of fruits and seeds from Barbadoes and other tropical countries, were all but overlooked by the gentlemen of the press.

The two Exhibitions will differ in this respect,—that here the interests of horticulture and agriculture, including every thing related to them, will be fully and efficiently represented. We shall be prepared to act our part as chroniclers in the department to which we belong; and at present we shall notice some of the shadows which precede the coming events.

Every effort is being made by the authorities to have the numerous works now in progress as far advanced as possible, if not quite completed, by the first of May, when the Exhibition is to be opened. At present, a considerable number of gardeners are employed in laying out and planting the broad open spaces outside the Louvre. The ground is to be laid out in grass lawns, and planted with shrubs and flowering plants. Some large ornamental vases, in stone, are placed at different points, and the whole premises will be enclosed by a costly railing, on which, as is the fashion here, there will be no lack of gilding. The borders of ornamental grounds in Paris are generally formed of ivy, which is at first planted like box, and after it has grown sufficiently, is trained in a low broad mass, and kept neatly trimmed. The deep sombre green of the ivy sets off the lively green of the smooth lawn, which is again relieved by the brighter tints and colouring of the flowers in the clumps. A neat little circle in this style was recently removed from the inner square of the Louvre, and a statue is to be put in its place.

The alterations immediately surrounding the *Palace de l'Industrie* are advancing rapidly. A broad carriage drive, leading from the avenue of the *Champs Elysees* to that of *Cours la Reine*, near the river, has been formed on each side of the building. This has necessitated the removal of a great number of trees,—I should think 200, at least. Between the river and the avenue of *Cours la Reine*, a spacious building has been erected for heavy and bulky goods, such as machines, and implements of all kinds. This building is of a circular form, and is remarkable for its great length, being at least *thirteen hundred yards* long. It is strongly built, chiefly of wood, but is covered at the top with sheet glass, and will be well ventilated. This will enclose a superficies of more than 30,000 yards, independent of its galleries, which will give an additional space of at least 8,000 yards. At first, a row of trees of perhaps twenty or thirty years old, extended the whole length on each side; but, of course, their presence was incompatible with the erection of galleries. They have, consequently, been taken

up with balls, and replanted on the Boulevards and other public parts of the capital. This was a work of some magnitude. The magnificent perspective view of the interior will not be the least of its attractions; for, standing at one end, the visitor sees the other dwindle to the smallest dimensions, and it will be quite invisible when the breath of some thousands of persons mixes with the atmosphere. This fine building, which, in general form, may be likened to more than half-a-mile of Paxton's first transept, though not so lofty, begins at *La Place de la Concorde*, and continues westward the whole length of the *Quai de la Conference*, and right behind the *Palais de l'Industrie*. Immediately in front of the latter, and on the other side of the avenue, extensive premises are now in course of preparation, under the direction of the Imperial Society of Horticulture, for the general Horticultural Exhibition. Besides commodious greenhouses and tents which will be erected, about half an acre of ground will be enclosed, and laid out as an ornamental garden, with several basins and fountains.

The *Moniteur* of the 25th contains a list of the juries selected for the different classes. In the class of objects belonging to forestry, fishing, hunting, and "products obtained without cultivation," I find the names of Professors Brongniart and Decaisne, both eminent botanists connected with the direction of the Garden of Plants. In the agricultural class, which also includes everything belonging to it, as horticulture, I presume, the principal names are those of M. Vilmoren and M. Boussingault. One might have expected to see at least M. Decaisne associated with the latter gentlemen; for he is the acknowledged head of the cultural department at the Garden of Plants, and he is, besides, the principal editor of the *Revue Horticole*, the only periodical here devoted to gardening and botany. But no doubt the imperial commissioners have made their appointments with the greatest discernment, and we may be satisfied that the gentlemen named in the different departments or classes will acquit themselves creditably.

The first class comprises mining and mineral products; and it may be recollected that these occupied the same priority at London in 1851. The second class includes objects relating to hunting, fishing, forestry, &c. In the Crystal Palace, this class was devoted to chemical and pharmaceutical products. The third class is that of the agricultural products, including everything relating to the culture of plants, vegetables, fruits, &c., as well as what relates to the rearing of useful animals. In this class, Mr. Cole and Dr. Lyon Playfair act as commissioners for England.

The Cattle Show is to be held during the first eight days of June; and I notice, from the programme which has just been issued, that the famed English breeds of cows, sheep, pigs, &c., take the lead in all the first classes. The highest prizes range between 800 francs (£32) and 1000 francs (£40). This exhibition will also include pigeons and poultry of all kinds, and we may expect the usual accompaniments in farm and dairy produce, as well as machines and implements; but probably the latter will form a separate show, or be included in the third class.

The question of preserving fruit of all kinds, but particularly Apples, Pears, and other garden sorts, has often been raised in the horticultural press, both in England and on the Continent, and this has so often led to the discussion as to the best means of preserving their forms and colours for the purpose of identification. To know the numerous varieties of fruit well, to be able to point them out with any thing like certainty, requires long, uninterrupted practice. Mr. Thompson, of Turnham Green, is, perhaps, without exception, the ablest person in this branch. He is among fruit, what Mr. Moore, of Chelsea, is among Ferns; and few persons have had so good opportunities of arriving at A 1 in the pursuit of any special object; but gardeners and amateurs, in general, not to speak of the public at large, have no means of ascertaining whether the names which they give their Apples or Pears are really correct, and almost every person who is fond of growing fruit has some sorts of which the names are wholly unknown to himself and his acquaintances. Names sent out from the nursery with the young trees are not always genuine; and even if they were, they are always liable to be lost or confused, and mistakes of this kind are not so easily rectified with

varieties of fruit as with species, or even varieties of plants.

In the many excellent museums of Natural History, either in England or on the Continent, we look in vain for the different varieties of Pine-apples, Grapes, Figs, Plums, Apples, Pears, Peaches, Nectarines, and other kinds of fruit. With this exception, and that of culinary vegetables, we may see named specimens of every thing that grows on the earth, or "under the waters," in all their minute scientific details, from the jaws of a mouse up to the great antediluvian animals, whose names we can hardly pronounce in a breath; yet, if we can judge from the eagerness with which people throng the fruit-tents of the Chiswick and the Regent Park *fêtes*, we may be satisfied that a *Pomological Museum*,* or whatever else it might be called, and considered merely as an agreeable show, would always secure plenty of admiring visitors, while it could not fail to be an invaluable source to all in quest of instruction respecting the names and general history of the different sorts exhibited. There is, indeed, no scarcity of books from which such information may be obtained; but even the best books on this subject furnish very scanty means of identifying any considerable number. Varieties of fruit, in general, cannot be subject to mere technical descriptions, however nicely or clearly framed, and it is well known that most of the terms employed for this purpose are necessarily vague and uncertain in their import. It may not be difficult to distinguish, by description, an Apple from a Pear, an Apricot from a Plum; but it is very different when we come to varieties of the same kind. Few persons, I imagine, would be willing to rely on an abstract descriptive distinction between a *Noblesse* and a *Royal George* Peach, or between a *Providence* and a *Montserrat* Pine. When we see them together, or good illustrations of them, we readily recognize their peculiar characters; but descriptions alone are of little or no use whatever,—large, small, round, juicy, melting, sugary, and similar terms, may mean nearly anything you please. Books, then, it is pretty clear, to be of any real value in this way, should contain accurate portraits of all the sorts and varieties enumerated; but such works, owing to the expense attending their preparation, could only be within the reach of a very limited number of persons; for it is very doubtful whether much reduced wood engravings, similar to those of plants in Loudon's famed Encyclopedia, could be made available for fruit. It is also to be observed, that several samples of the same variety, and even very often from the same tree, will assume different features in form or colour, according to circumstances, growth, age of tree, exposure, and particular stages of maturity. There is, therefore, an additional difficulty here in obtaining accurate portraits, however skilful the artist might be. At all events, it would be necessary to include a certain number of examples.

But while fully appreciating the value of illustrations, so far as they can be conveniently published in books, I am still of opinion that the best way of showing a certain description of objects, which cannot themselves be preserved for any length of time, is that of giving proportionate models, and also colours, when existing in the original.

In this category must be placed almost all cultivated fruits such as I have already enumerated. We can only preserve their forms and colours by models in plaster, wax, gutta percha, or similar substances. Some models, in wax, of some of the principal tropical fruits, are to be seen in one of the rooms of the Polytechnic Institution at London. Beautiful paintings of the same sorts are to be seen in the Botanical Gallery of the Museum at the Garden of Plants here. But it is clear that those who have had the control of these things have fallen into the mistake of supposing that tropical fruits only can be interesting to the public or to those professionally engaged in horticulture. The common fruits and vegetables grown in our own country are not known to the great multitude of those who frequent galleries of Natural History, except as so much agreeable and nourishing food. Every plum of like size and colour is a "green gage" in London, or a "reine claudé" in Paris. Ask what particular Pippin such or such an apple is, and the wonder will be that you think there are more than one. Anybody can tell you the difference between a turnip and a

* *Horticultural Museum* would perhaps be a more appropriate name.

cabbage; but, perhaps, ninety-nine out of every hundred have never heard of a "drum-head" or a "sugar-loaf." Surely, it is as fitting that we should have an opportunity of learning something about what we all see so often on the dinner-table, as of what can only be interesting or intelligible to a limited number of persons.

It will be recollected, that at the Exhibition in Hyde Park, Messrs. Lawson deviated considerably from the beaten track, and gave something like an example of what a collection such as theirs ought to be; for among its principal features were the wax models and coloured drawings of the vegetables commonly grown in the garden and field. To the lasting honour of these gentlemen, their whole collection may now be seen in the museum at Kew.

I have been led to offer these remarks on this subject from having very lately visited the fancy pottery works of M. Barbizet, of the Faubourg St. Antoine, whose models of fruit surpass anything of the kind I have ever seen elsewhere. Models of fruit are commonly made of wax; but those of M. Barbizet are made of a composition which he calls "Argile et carton pierre," and which is not in any way affected by ordinary heat or cold. It is hard, durable, and not easily broken. To those acquainted with the process, it may not be difficult to imitate the external appearance of fruit, so far as relates to bloom or colours; but the great merit of these models, besides the amazing fidelity of the imitation, is the fact that the colours are in no way affected by the ordinary process of cleaning, such as washing and drying. Where transparency is required, as in gooseberries and currants, this composition is equally suitable. These models are all solid, but not heavier than they would be if made with common plaster; and as for the imitation, nature has been so exactly copied, that even the most practised eye would be unable to distinguish between the real objects and the representations. No person would suppose that the dish of beautiful fruit which he fancied he saw before him was only a dish of models. M. Barbizet, as I learn, is the inventor and patentee of this particular composition, which is beyond all question the best material for models of fruit and similar objects which has been yet introduced.

JARDIN DES PLANTS.

The Garden of Plants has been gradually undergoing several important and desirable alterations or improvements, in addition to the construction of the aquarium and stoves, which I have noticed in a former communication. One of the cross avenues has been cleared of its old trees, which were rather in the way than ornamental or useful. Many of the decayed shrubs in the grounds have been taken up, and old dilapidated houses, now superseded, have been pulled down. The result of these and similar operations has been to give an air of smartness to the whole place beyond what it has assumed for some time. The houses at present are enlivened by many early flowering plants, such as Camellias, Azaleas, Acacias, Heaths, and Epacris. In the spacious Orchid houses there are several esteemed kinds in flower. Among these may be noticed a superb *Ansellia Africana*, having eight large spikes. Also, good examples of *Dendrobium Perardii*, *Cymbidium sinense*, *Epidendrum odoratissimum*, and a neat plant of the pretty *Sobralia sessilis*. Of other kinds in the same house, one or two deserve mention, as *Begonia Diricksii* (Lemoire), a remarkably vigorous species, having a strong stem, and leaves fully eighteen inches in length, with breadth in proportion; the flowers are whitish. With this were flowering plants of *Begonia*, *Jatrophaefolia* and *insignis*, *Pandanus Bromeliaefolia*, and *Bilbergia Skinneri*. In the same house there is a fine collection of the singular and beautiful *Anectochili*, *Lycopods*, and similar kinds. All the plants, particularly the Orchideæ, are remarkably healthy and well grown.

The Aquarium has now an aspect of healthy luxuriance such as is rarely seen. There is a good assortment of water plants in the tank, besides the *Victoria Regia* and the *Euryale ferox*, *Nymphaea Ortgiesiana rubra*, *stellata*, and *cærulea*, are at present in flower. Besides aquatics, there are many fine plants on the side shelves, which extend all round the house. At the time of our visit, those in flower noticeable for their healthy vigour, were *Pitcairnia ringens*,

Strelitzia reginae, *Puya Allenstani*, *Sinningea punctata*, several species of *Begonias* and *Tillandsias*.

In another house, or division of the same range, is a rich collection of miscellaneous stove-plants, including several new species of *Euphorbia* and *Zamias*, received from the Isle of Bourbon last year. But these and some others demand a distinct notice, which must be postponed till another occasion.—P. F. KEIR.

"DON'T KNOW HOW TO SHANK."

I HAVE only just obtained your No. for January, at page 263 of which I find a communication headed as above. There is in that article something so offensive, so swaggering, and overbearing, that I trust you will allow me to make a few remarks upon it.

The writer subscribes himself "C. B. S., Jersey." I have always found THE COTTAGE GARDENER characterised by a kindly tone, calculated to promote harmony and good will amongst professional and amateur gardeners. The person who advertised his Vine with the qualification—"Don't know how to shank," is, of course, a practical, professed gardener, and not an author, whose precise mode of expression is to be criticised with severity; though if it were, I think, I can show that it can stand the criticism of "C. B. S."

If we write or advertise in THE COTTAGE GARDENER, it is with a view to the interests of our favourite pursuit. But "C. B. S." tells us we had better mind what we are about, or we shall have him setting upon us with his club. He says,—"Man being the possessor of so bounteous a gift as that supremacy (over the rest of creation) should use it with reason, and not abuse it, or woe betide him if I come across his path."

At first I laughed heartily at such a vapouring; I wondered who this mighty "I" could be. At all events, I fancied he would give us his mighty name, that we poor scribblers might keep out of the way of such a terrible Aristarchus, who, for a mere blunder in our writing, would split our head. But, no; only "C. B. S., Jersey." Then, after a flourish of trumpets about his own high mightiness, he says—"I am prepared to subjugate prejudice, to overturn error, and to capsize all the frivolous humbugs, &c."

Pray, Mr. Editor, give us timely notice before this Don Quixote crosses the channel, and takes the road to charge windmills, and throw the whole horticultural world into confusion; "capsizing," nobody knows how many of our little greenhouses, to say nothing of Cucumber-frames, hand-lights, &c. "Playing Meg's diversions," as my old gardener once said of a cow, which one night pranced all over my borders, and "capsizing" a good many "frivolous humbugs," in the shape of bee-boxes, bird-traps, Dahlia hoods, &c. But to come to the point—the offensive expression "Don't know how to shank." Surely here is much ado about nothing; surely there was little more need for such a solemn truism as "Plants do not possess any knowledge or power of discrimination," than to tell us, in the words of the old song,—

"Boots an't made of buttered toast."

After an immensity of writing to prove a self-evident thing, he tells us, that to assert that "a Vine does not know how to shank," is an absurdity; and "a Vine knows nothing more than any other inanimate object." Was there ever such paltry criticism? Apply the same to Homer, Hesiod, Horace, Milton, and Holy Writ itself, and the same might be predicted of all these writings.

"A Vine don't know how to shank," may be rather an advertising phrase; it may not be in very good taste, nor a very choice expression, but to meet it as "C. B. S." does, is to break a fly upon the wheel, or to crush a worm with the fullest power of a Nasmyth's hammer. Besides which, the criticism of "C. B. S." will not bear examination.

Our own Milton represents the inanimate ocean as swelling with pleasure, and cheered at the delightful odours wafted over it from "Araby the blest."

"Cheered with the grateful smell old Ocean smiles."

Milton, P. L. Book 4.

The Greek poets, and Latin also, are full of such personification which nobody ever thought of knocking down with such a bold objection as, the ocean "knows nothing any more than any other inanimate object," and, therefore, it cannot be cheered, nor can it smile with joy.

What will "C. B. S." say to the Psalmist's figure, "All the trees of the wood rejoice?" Or Jeremiah xvii. 8., "As a tree planted by the waters, that spreadeth out her roots by the river, and shall not see when heat cometh, and shall not be careful in the year of drought."

What will "C. B. S." say about a tree seeing, or a tree being careful about anything? And will he tell on what grounds, as a mere figure of speech, he should so roughly assail a poor Vine advertised as "not knowing how to shank," any more than these and thousands of other personifications of a like kind?

Let him turn to Blair in his article on "personification," and he will meet with the following:—"The first place is unquestionably due to personification, or the figure by which we attribute life and action to inanimate objects." "It is a figure, the use of which is very extensive, and its foundation laid deep in human nature." Then, after saying that, "considered abstractly, it would appear to border on the extravagant and ridiculous, to speak of stones and trees, &c., as if they "were living creatures," he adds, of such objection, this would be "no more than childish conceit, which no person of taste could relish." Let, then, "C. B. S.," instead of falling foul of an unlucky nurseryman, take the bull by the horns and have a tilt with Blair, and all those on whose authority and practice he defends personification. I fancy he would find that he had got beyond his mission.

Now, I have written the above at the risk of being open to my own charge of "much ado about nothing." But it is not the mere flimsy, supercilious criticism of "C. B. S." which I should have cared for; it is the over-bearing tone, the offensive assumption of "woe betide him if I come across his path" that I protest against; and I do think, Mr. Editor, that I have some right to ask your insertion of this as an atonement for introducing amongst us kindly, good-natured, brotherly gardeners, so pugnacious a person as "C. B. S."—RUSTICUS, A. B.

AN AMATEUR HOTHOUSE.

In resuming, at your suggestion, the subject of my greenhouse (see page 478, Vol. XIII.), I may remark, that my object was not to have it put up at the cheapest cost. The price, therefore, stood me nearly £10. I do not put anything on the tools purchased, as they are so useful for many things. Now, first of all, as to the expense:

Best red wood, in lengths to order, at 1d. per running foot, for 1 by 1½ inches, and at 1½d. per ditto, 2½ by 1½ inches	£	s.	d.	£	s.	d.
Machine planing	..	..	0	2	6	
Carriage	..	..	..	0	2	0
250 feet of glass, 7 by 5 inches, and boxes	..	..	..	2	4	0
Note. Glass not all needed.						
Pipes	..	..	..	1	1	3
Fire and other bricks, and carriage of ditto and pipes	..	..	..	0	8	0
Mason for building, and lime and stone for furnace and flue	..	..	..	0	15	0
Two cast mounted furnace doors and brander	..	..	..	0	5	0
Wood for door (all glazed) and for stage	..	..	..	0	15	0
Large screws, hinges, nails, glue, &c.	@	..	..	0	12	0
Paint before puttying, and for putty	@	..	..	0	10	0
Note. Outside not yet fully painted.						
				£9	11	9

I will next detail the mode of procedure, which will answer some of the points referred to by you, and, perhaps, assist some one.

For the side, I took the two pieces of the two-and-a-half by

one-and-a-half inches wood, ten feet (the length), and two pieces, three feet ten inches (the height), and with the four formed the outer frame, morticing the shorter pieces into the ends of the long ones, and glueing and nailing.

For the other side the same.

For the one side of the roof, two of the long pieces, and two pieces four feet four inches, and with these formed a frame.

For the other side of the roof the same.

For the end, two pieces seven feet long (the width), and three feet ten inches (the height). The triangle fitted in separately.

For the other end, with the door, the frame was a little more complicated, as it has to be morticed into the door lentils.

Then, as to the smaller sized wood; it will require to be all run out with an astragal plane to make room for the glass and putty; it will then be put across the frames, at such distances as to suit the size of glass. I took about half-an-inch off the back of the astragal, where it touched the frame; also sunk astragals another half-an-inch into the frame in which they are nailed.

I then glazed with the frame flat on the grass, piling the one frame above the other as finished, and left the whole two or three weeks to let the putty dry. When lifted, not a single piece of glass slipped out.

After the furnace and the brick wall was built, I took the sides and ends, and bolted them with screws going through the two frames and a nut fastening in the inside. The roof was set on the grass the distance it would stand when placed, one of the pieces overlapping the other, and these pierced for the top screws. One piece was lifted to its place, then the other, and the screws put in where formerly pierced.

I have now to state one very important requirement for the stability of the structure. Before the brick wall was built, I sunk a strong square post at each side, in the middle, about three feet in the ground, at the proper distance for the side-frame being screwed to it. The posts are two or three inches higher than the side-frames, and form a support for them and for the roof; without these strong posts, I should have required an iron girder inside, which would have been in the way. The door is five feet eight inches high, by two feet two inches wide; the stage twenty inches high, but higher above the sand-bed; passage two feet wide; from the passage to the apex of the roof seven-and-a-half feet. Air is given by a swing window, one foot ten inches wide, in the side, on the side of the post farthest from the door, and by another hatch window, one foot ten inches wide, on the roof. This hatch window should not be fastened until after the roof is fastened together, as by getting up through the opening it saves the going on the roof before it can bear any weight. The roof at the eaves is also fastened with strong screws, and nutted to the side frames. There is room enough for the screw-bolts, a little care being taken at piercing. I took no note of the time occupied with the house, and cannot say how long the time was, nor put a value on it.

But, perhaps, my hints as to my greenhouse, No. 2, may be more practicable to many. I had scarcely completed No. 1, when, as I was passing along the streets, I observed some workmen altering a shop to put in plate-glass windows. It struck me at once, that the old windows might be turned to account; I, therefore, made enquiry, and found I might have one or all at five shillings each. I took the four. I again resorted to my posts. I put these posts three feet in the ground, one at each end of the two windows placed lengthways, another at the joining of the two windows, and one in the middle of each window, securely screwing the windows to all the posts. I then put the other two windows above, as a lean-to roof against the garden wall, making a small nick in the posts to allow the top windows to overlap the side windows, so as to carry over the rain. The lean-to roof has a few strong nails driven into the wall above it and below it to keep it firm. I got another smaller window in two pieces, which I have made into doors at each end. My garden wall was not high enough to allow my placing the windows for the sides on brick; it is, therefore, rather low; but I intend it only as a summer stove-house, and I will dig a passage up the middle, and apply the earth taken out as a stage, as recommended in the THE COTTAGE

GARDENER for lowish-roofed houses. It, however, looks uncommonly well, and for parties who are near towns, and who wish a very cheap house, it will be quite an easy matter to get windows in these shop-altering days at five shillings each; for a glazier will not take out the glass for its value, and the window will not be put into a new house. This house is seventeen-and-a-half feet long, three feet eight inches wide, three feet eleven inches high in front, and five feet eight inches high at the back (the two top windows being two or three inches wider than the side ones). The expense of this house was, for the five windows, twenty-five shillings; for posts, hinges, screws, and mending a pane or two of broken glass, ten shillings; in all, only thirty-five shillings for a greenhouse of about sixty square feet of ground area!

I have only one word to say as to my fire. I always attend to it myself. When I rise in the mornings, I supply it; it is then very seldom out; I give a farther supply when I go to my business at nine. It occasionally gets a mend in the forenoon; but those days it has not it is still alive at half-past three, when I get home; I then put on some more coals. I again mend it as I leave at seven, and finally, as I get home at ten. This is all the trouble it gives. So you see, if large pieces of coal were put in, they would soon blaze off, and it would be continually out when I went to it. I made a trial, yesterday morning, at six, in a little frost and no sun; there was no fire on during the night, and I found the thermometer, hanging in the very middle of the house, to rise *gradually* 10° in half-an-hour from the time of putting the lucifer-match to the lighting in the furnace.—A. G. Edinburgh.

P.S. The adage goes, "Experience teaches fools;" but experience may teach wiser men. At any rate, any one may see, that by certain modifications on No. 1, such a house might be made for about seven pounds; such as having more brick and less glass for the sides; ordering the small wood three by two inches, and afterwards ripping it up; using glass broader than mine; and which I see, from advertisements in *THE COTTAGE GARDENER*, could be got for the same price I paid for mine, which would thus reduce the quantity and price of wood; with such other retrenchments as might present themselves to the builder.

QUERIES AND ANSWERS.

GARDENING.

BLOOMING FORTUNE'S YELLOW AND COPPER-COLOURED ROSES.

"Will you do me the favour to give me some information on the proper mode of treating Fortune's yellow and copper-coloured Roses, to ensure their flowering? I have a plant of each on a south wall; they grow well, but do not flower.—A. P. B. H."

[No one about London seems to hit the right way of flowering these Roses. When they flowered in the Garden of the Society, people said that Mr. Fortune's estimate of them was at fault; but we heard of some one near Hereford, some friend of Mr. Bentham, the great botanist, who used to be connected with the Society, who bloomed them "magnificently." Can Mr. Goodsall, or some other friend in that quarter, tell us how? We are all in the dark here about them, as much so as A. P. B. H.]

MUSHROOM BEDS.—ARCHDUKE CHARLES PEAR.

"I have a Mushroom-bed which was finished soiling (having been previously spawned) on Saturday last. I have now covered it over seven or eight inches thick, *lightly*, with littery-dung. I expect to have to remove this before any Mushrooms make their appearance. How long must I allow it to remain on the bed before I remove it? How long will it be before I may expect any Mushrooms? and how long will the bed (eight feet long by two-and-a-half broad) continue bearing? Also, the character of the *Archduke Charles Pear*? Is it early or late; large or small? and

what aspect suits it thirteen miles north of York?—J. R., *Easingwold*."

[The *Archduke Charles Pear*, or, as it is sometimes called, *Charles d'Autriche*, is, when well grown, three to three-and-a-half inches long, and two-and-a-half wide; of an abrupt, conical shape, and ripens in October. It likes a warm soil, and warm situation, and, therefore, north of York it would succeed best against a wall; a west aspect would do.

Keep the covering of litter on the Mushroom-bed all the time it is producing, regulating the thickness of the covering by the temperature of the bed. The bed ought to begin producing four or five weeks from the time of making, and should continue yielding Mushrooms for several months. All this depends upon the favourable temperature and correct spawning of the bed.]

BLOOMING GUERNSEY LILIES THE SECOND YEAR.

"I should be much obliged if you would kindly give me all the particulars of *Guernsey Lily* culture. I am led to believe it is very difficult, but not impossible, to blossom them the second year, and am very anxious to do my best for that end. Mine blossomed finely last year, and are at present throwing up strong-looking leaves. I have no glass, but a hotbed and cold pit, though, if desirable, the plants could be kept in a warm sitting-room. Would the climate here (south-west part of Dorset) be too cold to adopt, with any chance of success, the mode practised and recommended by C. B. Saunders, of the *Cæsarean Nursery*, Jersey, page 86 of your 266th number? Perhaps, if that gentleman catches sight of this application in your Magazine, he would kindly add any hints.

"Do you find many complaints of the loss of *Carnations* from this hard winter? I have always understood them be to comparatively hardy; but this winter, though I have preserved nearly 500 *Geraniums*, *Salvias*, *Verbenas*, &c., in the pit, I have lost full half the *Carnations* in the garden.—J. S. K."

[No one in the British Islands ever flowered the *Guernsey Lily* two years running under any mode of management; and we fear, if all the nurserymen in Guernsey, or Jersey, were to fill *THE COTTAGE GARDENER* with all they know about them, you would never do the least good with them.

We have heard no complaints yet about *Carnations* having suffered by the frost, but it is not at all unlikely.]

COMPOST FOR THE COCKSCOMB.

"Can you inform me, in your next number, what is considered the best or richest compost for Cockscombs when they have attained the height of two inches? and also the best liquid-manure for them? The valuable information in your volume for 1848 does not clearly state the mixtures. Your other numbers I am sorry to say I have not, between that and 1854.—AN AMATEUR AND SUBSCRIBER."

[Any sweet, fresh soil, rather light, will grow the Cockscomb well, if the pot is well drained, and strength given by weak manure-waterings. Of artificial manures, good guano is the best, one ounce to the gallon; from domestic animals, we prefer cow-dung after the liquid has fermented, and been cleared with a little quick lime thrown into it. About a bushel of cow-dung would do for a 36-gallon barrel, and then, when using the liquid, you must add to it an equal quantity of clean water. One part of good fresh loam from the side of a highway, one fourth part of decayed sweet leaf-mould, and one fourth silver sand, will grow Cockscombs admirably. We have used dried nodules of cow-dung with good effect, instead of leaf-mould, but the dung was two years old. The plants dearly like a little bottom-heat.]

PROMOTING THE GROWTH OF CAMELLIAS.

"Will it do to put my Camellias into the Greenhouse, now that they are making their wood? The house has a constant fire to keep the Vines growing which are in it.

I thought it would, perhaps, force the Camellias too much, and prevent their flowering next year.—S. M. S."

[You cannot do better than you propose; the sooner the wood of the Camellias is made, the sooner the buds will set; and, provided you give them light and air at the end of summer and autumn, there is no danger of your flowers coming too soon.]

CLOUDING GLASS TO PREVENT SCORCHING.

"Last year I built a span-roofed greenhouse, with large ventilators at the top. The house stands north and south; the greatest surfaces of glass, consequently, are exposed to the east and west. The glass is the Horticultural 21 oz., 20 by 12. The morning sun, I consider, does not and will not do any harm; but the midday and afternoon *certainly will*. Would Hartley's rough glass have prevented the *scorching and powerful reflecting heat* of the sun, if it had been used on the west-side? Will now, the evil be prevented by a slight dabbing of the glass in the inside with white paint? or should you recommend canvass? which in the long run will cause more trouble and expense? Nothing can have done better than my new house during the winter months; but I am quite certain that in such a house, during summer, plants cannot live and thrive without a great subduing of the light. I may just mention, my house is heated with hot-water, and the pots are placed on tables of stone slabs. In fact, I have done everything on the best principle; but think I have committed an error, as I mentioned above, in not using two *sorts* of glass.—J. B. R."

[With plenty of air, and glass free from spots, we have seldom known of decided cases of scorching; but in very sunny afternoons, abundance of air, and a slight shade must be given. Hartley's Patent would remedy the evil where it exists. Very thin paint would also do in the way you propose; but it will be difficult to get it off. If you got some double size, such as is sold in Smithfield, in the jelly state, dissolve it in a kettle, add a very little whiting, and give a dash of oil and turpentine, and brush it thinly on the outside; it will resemble Hartley's Patent, and be partly washed off in winter by the combined damp and rains. The exact proportions were given in a previous Volume. We have used the size without anything, but the size of a walnut of whiting, in a half-gallon of size, gives it more consistence, and half-a-gill of turpentine, and rather more oil, will make it stick more firmly. It should be brushed on thinly when hot, and when the glass is dry. Without anything at all but the double size put on hot, the glass was dimmed sufficiently to blunt the force of the heating rays, and it generally kept on until November. A small cask of size costs somewhere about 3s. It will not keep long.]

PLANTS IN A LOOK-OUT ROOM.

"At the top of my house there is a small room, about seven feet from wall to wall, of an octagon shape, with glass windows on seven sides. Situation in the centre of a town. I tried flowers last year, but found they grew very fast and weak without blooming, caused, I suppose, by the absence of top-light, the roof being slated, so that the sun shines in only for a short time in the morning and evening, combined with the extreme cold in winter, and smoke from surrounding chimnies. I should be glad could you state whether Ferns and Lycopodiums would flourish in such a situation; and if, by employing a gas-stove in winter, the greenhouse varieties could be grown; also, whether the light would require moderating.—G. W."

[We should think your want of success with flowers, if you have seven windows, was more owing to want of plenty of air than want of light. Perhaps we misapprehend your case. Smoke from chimneys would be a great drawback, but the gauze curtains, and the free use of the syringe, would be a good remedy. In fact, shading the sunniest side would prevent the blacks entering, by rendering less air necessary. We have no doubt that Lycopods, &c., would do better, because they will thrive in a more confined moist atmosphere. They will like a little shade during the hottest part of the day. If you can get gas easily, you may either let the heat from a burner pass through a close-jointed tin tube, until it passes

out of the house, or heat a tin kettle with gas outside the room, and take a tin pipe from it into the room and back again, for water to circulate in.]

CONCRETE ROADS.

"Linda has made her garden-walks on the concrete principle, and they have answered perfectly on a level, but not *quite* so well on an incline; but nothing to complain of, when rolled after a cracking from frost. But on the carriage road it has not answered, as the horses' feet cut into the lime, and show the white of the same. Also, in the wet weather it was broken and adhesive, and far from pleasant. This carriage-drive is on an incline the whole way."

[The carriage road wants a thin coat of rough gravel to "eat the lime," and to be rolled into the rest while the road is yet wet. But after all, lime is not nearly so good for this concrete as chalk.]

POULTRY.

LUMPS ON BANTAMS LEGS.

"I should feel obliged if Mr. Tegetmeier would, through the medium of your paper, tell me what will cure tuberculous diseases on Bantam fowls' legs.—W. W."

[It would be impossible for me even to hazard a suggestion unless I saw a case, or had much fuller particulars than are here sent as to the exact locality, progress, and nature of the disease. Inflammatory swelling, resembling gout, generally in Cochins, and chronic inflammation, with thickening of the cutis, generally in Dorkings, commonly called humpfoot. Corns are the only disease of the feet that have come under my notice. I should be happy to examine and treat a case, if forwarded to me carriage paid.—W. B. TEGETMEIER, Wood Green, near Hornsey.]

TO CORRESPONDENTS.

MANY Answers to Questions and several excellent Contributions are postponed until next week from want of space.

SHELLESS EGGS (*A Young Lady*).—Your hens being "kept in a confined space," and probably too highly fed, the usual consequence—inflamed egg-organs—has occurred. Give the birds less rich food, as much green food as they will take, and let them have more exercise. The disease will then rarely occur. To mitigate the disease now, give them every second day, for a week, pills of one grain of calomel, and one-twelfth of a grain of tartar emetic.

MELON AND CUCUMBER SOIL (*E. A. Day*).—The top-spit from an old pasture is as good a soil as can be used for these plants. Thanks for your praise.

FILTER (*A Three Years Subscriber*).—Why not make one for yourself? You will find drawings, and full particulars, on the subject, in our 13th and 19th numbers.

PARIS POULTRY SHOW (*A Subscriber*).—As soon as we can obtain fuller particulars they shall be published.

MANURING POTATOES (*M. Phillips*).—If your ground is very poor, wait until the Potatoes are well in leaf. Then give them a good soaking between the drills with Guano-water, one ounce of Guano to each gallon.

PLANTING BROAD BEANS (*Idem*).—Plant them six inches apart in the drill and two inches deep.

CHURN (*F. A. C.*).—Apply to Messrs. Dean, Dray, and Co., opposite the Monument, London Bridge. They will send you drawings.


CUTTING DOWN LARGE LAURELS (*Evergreen*).—The best time for doing this is at the end of April. They may be cut down to within eighteen inches of the surface, and they will soon shoot out again.

CHITTAGONG FOWLS (*A Constant Reader*).—Your sailor was much nearer than usual to correctness when he called them "Citygongs." They are a very large variety. We believe them to be a cross between the Malay and the Dorking. Try whether they will thrive with you.

FLOWER-GARDEN (*An Ignoramus*).—The four union beds on the axis of the diamond, from 5 to 12, should hold your brightest colours, as scarlet and yellow, one of each at each point, or two of each opposite each other, the ovals between them, from 1 to 4, should be for Verbenas, Petunias, with or without edgings of some other plants, and the bottom part of the middle figure should be with a mixed assortment of herbaceous plants, annuals and spare bedders, if you are fond of such, but if you prefer the mass system, variegated Geraniums are the best; and the top figure over this should be some dark purple, as Petunia, or with mixed plants, like the bottom; no scarlet, yellow, or bright purple, or rose, is admissible in these basket beds. The plan is very pretty and quite unique, and on that account we have broken our rule of *non intervention*—we only look over plans which are already planted, or proposed to be planted; and from seeing the *style* of planting, we sometimes see improvement on *that style*. We never offer any style before another.

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WEEKLY CALENDAR.

D M	D W	APRIL 24—30, 1855.	WEATHER NEAR LONDON IN 1853.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in Inches.						
24	Tu	Hydroporus fluviatilis.	30.416—30.299	51—18	N.E.	—	48 a 4	8 a 7	2 33		1 52	114
25	W	St. MARK. PRS. ALICE B. 1843.	30.427—30.374	51—39	N.	—	46	10	2 58	9	2 3	115
26	Th	[DS. GLO. B., 1776.	30.391—30.302	56—35	N.E.	—	44	11	3 17	10	2 14	116
27	F	Colymbetes striatus.	30.002—29.802	54—36	N.W.	13	42	13	3 32	11	2 24	117
28	S	Hydaticus transversalis.	29.913—29.840	53—37	N.	—	40	15	3 45	12	2 34	118
29	SUN	3 SUNDAY AFTER EASTER.	29.699—29.637	53—29	N.	04	38	16	3 56	13	2 43	119
30	M	Elater murinus.	29.528—29.295	52—46	S.W.	04	36	18	4 9	14	2 52	120

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 60.2°, and 37.8°, respectively. The greatest heat, 81°, occurred on the 28th, in 1840; and the lowest cold, 25°, on the 26th, in 1853. During the period 115 days were fine, and on 81 rain fell.

THE communication we published at page 243 of our last volume relative to the “Finding of Water with Hazel Rods,” has not only brought to us many communications upon the subject, but also a pamphlet, entitled “A Narrative of Practical Experiments” relative to Water finding.* So that if the practice were not of itself interesting we have it so forced upon our attention that we must ask our readers’ attention to alleged facts sustaining what may be true, and if true is valuable.

We are quite as sceptical as to the truth of this mode of discovering the treasures of the earth as any of our readers can be; but our scepticism is founded upon that unstable consideration that we cannot explain why the “Dowsing Fork” is influenced as is alleged. Such consideration is unstable, because the world must be universally sceptical about everything if nothing was to be believed the causes of which could not be explained. Why the magnet points to the north, who can say? Why sealing-wax becomes electric by friction, who can explain? Why one Rose is scentless and another perfumed, who can tell?

Rhabdomancy, or divination by a rod, is no modern invention; for obscure allusions to it are found even in the Old Testament, and its efficacy in discovering springs of water and veins of metal has had believers among those whose names are favourably known in the annals of science.

George Agricola, the German Metallurgist of the 16th century; John Sperling and Theodore Kirchmaier; Richelet, and Morhoff, the well-known chemist, were all believers in the power of the Divining Rod. M. Thouvenot and the Marquis le Gendre published works in which they explained the power on magnetic or electric principles; whilst our own countryman Pryce, in his “Mineralogia Cornubiensis,” in 1778, records many instances of the Rod’s successful employment. Even Linnæus bears testimony to the same fact, for he relates that hearing his secretary extolling the virtues of his Divining Rod, he concealed a purse containing one hundred ducats under one of the plants of Crowfoot, or Buttercup, growing in a meadow. The company with Linnæus so trampled over the meadow that Linnæus could not detect where he had hidden his ducats. His Secretary’s wand pointed out the place, and

* A Narrative of Practical Experiments, proving to demonstration the Discovery of Water, Coal, and Minerals in the Earth by means of the DOWSING FORK, or DIVINING ROD. By Francis Phippen. London: Robert Hardwicke, Carey Street, Lincoln’s Inn, 1853.

Linnæus winds up his statement with the observation:—“Another such experiment would suffice to make me a proselyte.”

Mr. Phippen relates the following as facts within his own knowledge:—

“The next fact we shall mention took place on the premises of Arthur Phippen, Esq., the well-known surgeon, who resides at Wedmore, near Wells, in Somersetshire. On Tuesday, the 10th of September, in the present year, a person named Charles Adams, was brought from Rowberrow, near Shipham, to ‘Dowse’ for water. Adams is forty-three years of age, and has practiced Dowsing since he was thirteen, in the course of which time he has been accessory to the sinking of upwards of 100 wells. To prepare for his experiment, he went to a hedge, accompanied by our correspondent, and cut from it a forked white thorn twig of this year’s growth, about eighteen inches long in each stem. He then entered the garden, and walked about, with his apparatus projected in the usual way, to search for water. He had walked but a few paces over the soil, when the fork was repelled, and the position of the spring discovered. This spring he traced west and east to a considerable distance, until he arrived over a covered well, of the existence of which he was totally ignorant, and there the instrument became so much agitated, that it required a strong pressure to keep it down. All the spectators, including a reverend divine and our correspondent, successively held one of the branches or stems, and every one of them was convinced by the resistance made to his effort that the ceremony was no delusion. The next experiment was made in the kitchen, the floor of which is covered with stone, and under which there are no springs. In the absence of Adams, three hats were placed, crown upwards, on the floor at equal distances, and under the centre hat were placed three silver spoons. Adams was then called on to exhibit. To the two empty hats the Dowsing Fork was immovable, but when held over the centre hat, which covered the spoons, it was driven back towards the breast of the operator, just as when the presence of water was indicated. There was still another experiment on the same occasion. The three hats were placed again on the floor, the first covering a small diamond pin, the second three silver spoons, and the third a gold watch, chain, and seals. The first and second hats produced a powerful effect on the Dowsing Fork, that which covered the diamond pin being by far the more powerful, while that which covered the watch, chain, and seals was but slight, being hardly perceptible to the different witnesses of the exhibition. Adams, who is a very sober, industrious man, can produce testimonials of his ability and success in the extraordinary process from many persons of the highest respectability in the county of Somerset.

“We will add but one fact more to those which we have already stated. The experiment took place on the premises of John Barrow, Esq., one of the magistrates of the district, a gentleman in every way superior to the influence of vulgar prejudice, but at the same time too enlightened to shut his eyes with obstinate incredulity against anything capable of experimental proof. On Monday, the 9th of September last, in the presence of Mr. Barrow himself, of our correspondent, and of several other gentlemen, Thomas Tyler, of Latchem, a village near Wedmore,

a man 70 years of age, performed the same operation, that of dowsing for water, with the same success.

"Amongst other experiments which proved the success of the 'Virgula Divina,' or divining or Dowsing Rod, in the discovering water, coal, and ores, Adams, the Dowser, to whom we have before alluded, stated that he had recently been sent for by the Rev. Mr. Foster, at his seat near Sodbury, in Gloucestershire, to give advice on the subject of procuring water, that gentleman having, at considerable expense, sunk a well full sixty feet in depth, without arriving at a drop of water! Upon dowsing, Adams quickly discovered a spring within six feet of the wall, which spring he conjectured to be about twenty feet under the surface, and on descending to that distance into the well he perceived oozing of water from the side. He accordingly recommended his employer to make an arch, of three feet by two feet in width and six feet in length, from the spot in the well whence the water oozed, and that being accomplished, the workmen found an abundant supply of excellent water, which speedily filled the well to the extent of forty feet."

In addition to these we have received the two communications which follow, both of them from trustworthy contributors, the last being a Physician.

"An article by C. B. S., in your number of the 26th of December, brought vividly to mind a similar occurrence related to me by an intimate friend. One day he was in company with a French gentleman (Col. Dubourgh), who possessed an estate in France; a discussion arose concerning the finding of articles that had been lost; he said that he found a wedding ring by a very strange process; the ring was lost by a woman whilst haymaking in a field on his farm, he happened to be near, and observed a female in much distress in searching for something she had lost; on enquiry, it proved to be her wedding ring; he immediately cut a forked hazel rod, rubbed his hands, also the end of his stick, with a gold ring, and thus armed searched for the lost treasure; after traversing awhile with the fork in his hands, and the end in the direction of the earth, the magnetic power (for such they supposed it to be) began to operate, the magic rod entered the centre of the ring, to the unbounded joy of the astonished owner. This gentleman also declared water could be found in the same manner. To prove his words, he cut a similar forked rod, and asked my friend to put it to the test, who instantly dipped his hands in water, likewise the rod, and walked over a field, at one end of which was a small streamlet; in passing over a wide plank that was placed to connect an adjoining field, the rod indicated signs of animation, and forcibly entered the water; my friend stated he held the fork with both hands, and the power was such as to leave an impression of the stick on his hands for some time. These two gentlemen were savans, but not sufficiently to solve these mysteries.—A GUERNSEYMAN, *Marden Nursery, Winchester.*"

"With reference to the curious subject, 'The finding Springs with the Hazel Rod,' on which your correspondent, C. B. S., asks for information, though he is not, I suspect, likely anywhere to obtain a very satisfactory elucidation of the physical phenomena he describes, at least, nothing that I have read or heard of has appeared so to me, I may refer him to an able little work, by Dr. Herbert Mayo, '*On the Truths contained in Popular Superstitions*,'* in which he will find an interesting chapter devoted to the subject of 'The Divining Rod.' While fully convinced, as well from his own experiments, as from the testimony of others, of the reality—the *bona fide* existence—of the remarkable phenomena in question, Dr. Mayo seems unwilling to hazard more than a conjecture as to the precise agency to which they are attributable. He supposes, however, that the Divining fork in the hands of the operator may become the conductor of "some fluid, or force," emanating from, or disturbed in, the body by terrestrial agency; and he appears to favour the belief that this force is the newly-discovered physical principle of Von Reichenbach, to which the name '*Od*,' or, 'The *Od Force*,' has been given. Since Dr. Mayo's book was written, Von Reichenbach's work, detailing his discoveries and researches on this new principle, has been published in this country, by Professor Gregory of Edinburgh; and this

eminent gentleman's adherence to Von Reichenbach's doctrines created at the time no small stir in the scientific world, and particularly among the Alumni of the University to which he is attached.—W. C. G."

SOME of the various points in which existing *Poultry Exhibitions* seemed capable of improvement were recently alluded to; we now turn to the circumstances under which new associations of this description may appear to be called for.

It will hardly be expected of us to enter into any proof of the assertion that, from one cause or another, these meetings have become more numerous than is consistent with their favourable progress and accomplishment of the views of their promoters. Localities, however, may readily be pointed out, where an opening is afforded for a Poultry Show, with every reasonable prospect of success. Nor is this opinion at all at variance with our condemnation of the undue multiplication we have complained of. Many districts have more than they require, and, consequently, more than they can support; while, elsewhere, a wide tract may be found devoid of the means by which Poultry excellence is best attainable. As a general remark, we might observe that the number of our English counties (for of Wales, Scotland, and Ireland, we have no sufficient data now before us on which to build an opinion) would probably best represent the requisite number of Poultry Societies consistent with a successful career and permanent utility. If the smaller counties might, in several instances, be amalgamated, the larger might well be divided for this purpose into separate districts.

The novelty of the undertaking has contributed in an important degree to the pecuniary success of the first and second exhibitions of a newly-formed society, where a few energetic men, actuated by a real desire to forward what they believe to be a valuable branch of agricultural economy, have become responsible for the necessary outlay. But support of this description must not be relied on for ultimate efficiency; for the mode and means furnished on such grounds, however valuable as giving the first impulse, are subject to so much uncertainty, that unless the beneficial nature of the undertaking is gradually recognized and supported by the neighbourhood and the public generally, failure is inevitably at hand. We are now in a position to deal very differently with this subject than we should have ventured on doing a short time since. A pursuit hitherto unduly neglected, which claimed attention not less for its actual importance in an economical point of view than for its effective administration to our interest and amusement, had to be brought prominently forward, and this was effectually done by the numerous Poultry Shows that extended throughout the length and breadth of so many of our English districts. But one main purpose being thus attained, objections, more than counterbalancing other advantages to be derived from these bodies, led to their gradual reduction; a process

* Published by Blackwood & Sons, in 1851. Price 6s.

we should have reluctantly urged in the early periods of the Poultry movement.

Let us presume a suitable district, and a body of gentlemen anxious to secure for it the benefit of a well-organized Poultry Society. The appointment of an efficient committee is the first step. The numbers of this body will depend on the anticipated number of pens; but our advice would suggest a limited number, as more effective for working purposes. Three, five, or seven would meet the requirements of most exhibitions, and the duties of this body would thus be probably better performed than if they had been entrusted to any larger number. But really active gentlemen alone are implied in this calculation; not those persons who desire the publicity of their names appearing in the list and the little consequence that the position may give them, but hard-working, zealous men, who have the good of the Society at heart, and who scruple not to give their time and thoughts, and to undergo fatigue and vexation, that the undertaking may be carried out successfully. Subdivision of their labours follows. One is to be entrusted with the arrangements and fitting up of the building or tent; another to act in concert with the Secretary in all the details of advertising, and other preliminary arrangements; while the Chairman should be responsible for the onerous duty of appointing the Judges. In the present state of the question respecting these officials, and the mode in which their labours are performed, it certainly appears the wisest plan to confide their selection to a single person; division of opinion in the Committee on this point would be fraught with many evil consequences, and it is at least prudent that the names of Judges should not appear till after their awards are published. There are, probably, few instances where the services of a paid Secretary are not well worth the outlay, since it rarely happens that those to whom the office is given without emolument, possess both the requisite habits of business and leisure. As the time comes on, the superintendence of the birds when sent in, their distribution in the pens, feeding, and general supervision, with the management of the sale office, and the repacking and sending off, are charges to be previously allotted to those who appear most competent for them.

But one of the most serious questions for the committee of a new Society refers, unquestionably, to the season at which their exhibition should be held. Summer and early autumn will bring more visitors, but are less favourable to the appearance of the birds, and the main objects of the exhibition. Before June, old and young birds alike are unfit to leave home; the former being commonly occupied with their young, the latter being as yet too juvenile for such excursions. In July, the chicken-pens fill well with creditable specimens; but the plumage of their seniors is at least on the wane; nor, speaking generally, are they in condition again till November, which month, with December and January, are decidedly the most appropriate for a Poultry Show. But beyond the mere season, the day for the meeting will require consideration, so as to suit

the neighbourhood, and avoid clashing with any of our leading exhibitions, or the districts whence birds may be expected. Two, or, at the most, three days, should be the period of its continuing open to the public; and, as regards the period set apart for the Judges' labours, we would refer to what was said with respect to that point in a recent impression, viz., that sufficient time is rarely allowed these gentlemen, and thus it is that their duties cannot be so well performed, either with a crowd around them, or the Committee reporting to them the clamorous cries for admission at the doors, when the appointed hour for opening has arrived. As before observed, our comments on Poultry Shows are no longer influenced by the previous necessity of encouragement to a novel experiment. They have now attained an advanced stage of growth, and great evils would inevitably follow, if, wherever faults exist, they were not plainly spoken of in terms of condemnation.

Committees, likewise, cannot now be permitted to shelter themselves, in case of proved error, under the plea of ignorance or inexperience, either as regards the organisation or practical working of their several societies. Information on all points is within their reach; the difficulties and drawbacks on their plans are matters of notoriety, so that if with this full knowledge the responsibility is still assumed, blame, in nine cases out of ten, can only fall on their own shoulders where failure may occur. Let it be first ascertained that the district in which it is proposed to establish a Poultry Show really requires it; and let this be tested by the evidence of a satisfactory subscription-list; and when these points have been duly determined as settled in the affirmative, liberality in the prize-list, with a good system of general management, may safely be trusted to for what remains.

FLOWER-GARDENS.

PRIMULAS.

EVERY flower-garden in the country, from the highest to the lowest, ought to possess such plants as the following:—Ten distinct kinds of border *Auriculas*, including "sels," or alpine; ten *Polyanthuses*; and some few varieties of hybrid *Cowslip*: all for "spring flowers," in single rows along the borders, just behind the Crocuses; or in little beds, using three kinds only in each bed, that is, two of the most distant, or distinct colours, to mix in equal numbers and in good contrast; and one kind of self, or one colour all over, to border the bed all round. The very prettiest bed of them I ever saw was thus planted, in 1820, about half a mile out of Beaulieu, in the garden of John Fraser, Esq., then Factor over the Beaufort Castle estates. Mr Fraser was then the most tasteful amateur flower-gardener to the north of Edinburgh; at least, Mr. Niven told me so at the time, and he ought to know, for he himself was then looked upon as the most promising young gardener in Scotland, and who had seen the most distant parts of the country. Mr. Niven's own spring border flowers at Belladrum were the next best arranged I ever saw. He, too, made use of vast numbers of *Auriculas* and *Polyanthuses*, Daisies, Crocuses, and other bulbs. I kept to the old tune myself all through life, till I came here. I never wanted "new seedlings" in *Polyanthus*, at any rate;

but latterly the Auriculas would not do so well on the soil, or under the system I was compelled to adopt, that of removing the plants every year as soon as they were out of bloom. You may believe me, therefore, when I say, that spring borders look perfectly insipid to me if they are not profusely furnished with these pretty flowers; but I put the charge of their neglect against the "Fancy," because they, the Fancy, wanted and urged the rest of the world to believe there was nothing like "leather" in growing the tribe; but the rest of the world could not grow them that way, or fancy them much where they could, and the upshot of the thing was that a spirit of disappointment got "over the borders," which deprives the English "spring garden" of two-thirds of the beauty, variety, and perfume of those beyond Balmoral.

I once ran "out of sorts" at Shrubland Park—I could not gather a thousand spring flowers for the rooms; what was to be done? Breeding-in-and-in deceived me in *Primulads*, if there are such lads, fresh blood must be introduced from somewhere. I wrote to Mr. Carter, of Holborn, about this time of the season; told him what was "up" with me, and from his mixtures, I had 5,000 plants in bloom the very next season, and the whole did not cost Sir W. Middleton five shillings, from first to last. Any one may get up a thousand of these, to come in next year, for one shilling, by doing just as I did to get myself out of a fix. There is room enough in the smallest garden for a thousand of the prettiest of all the Auriculas, Polyanthuses, and Cowslips, but there are very few in England, even among gardeners, who are aware of one-half of the beauty and variety which these three sections of one genus can furnish from seed, and that, too, at that very season when flowers are most wanted. Then, as to the fashionableness of such a tribe—for I would never fight against fashion—I could mention seven Peeresses who, from my own personal experience, are so fond of these very flowers as to call them "charming," whenever they can get hold of them. I have heard some of them regretting that their own gardeners did not pay that attention to "the flowers of our childhood," which they often expended on mere "trumperies."

THE CORN-FLOWER.

This, the *Cyanus azurea*, is another flower of which most ladies are very fond in nosegays. There are many kinds of them to be had from a threepenny packet of seeds, to be sown just about this time, in any out of the way place, or among shrubs, where there is an opening. I have had as many as seven or eight kinds out of one small packet of mixed *Cyanus*. These, and the Scabious flowers, which are still more numerous in varieties, are among the best I know for teaching one the value of shades for grouping flowers together. A plate of damp sand, flat on the surface, is the best for arranging these shades; the cut flowers to be in rows across, or in circles; each row or circle being of one kind of flower, then the next shade, and the next, till you get them all to please the eye. One who has not been accustomed to teach the eye with this kind of practice, and all through the season, can have little idea of the value of such exercise.

SNAPDRAGONS.

Antirrhinums, or Snapdragons, which are sown between the 25th and 30th of April, will come into flower from the middle of July, and go on till the frost comes, and of all the plants I know for "making up" they are the most useful—making up means to fill up, where annuals or herbaceous plants are done with, or where anything failed or died off suddenly, and so forth. The way to make the best of them is to sow them rather thinly, in single rows, anywhere in the kitchen-garden, to

leave them as they come up till the first flower opens, which will not be very long "a coming;" then, if the flower does not please you, pull up the plant at once to make room for better ones. When a row is in bloom from end to end, after the bad ones are pulled, one can get all the light flowers removed together for a whole bed, or any place which needed repairs, or all the shades of purples, if they were most wanted, or a regular mixture of light and dark flowers; and even where flowers were not so much wanted as a mass of green to fill up, these Snapdragons are most useful. No one likes to have a large blank anywhere about the garden while the weather is good, and as plants must die out, as it were, it is useful to know which are the most accommodating for making up their places at the least cost. Every one likes to keep up "appearances," but I would not place much confidence in the taste of a man who would pay "through the nose" for a thing, merely to save appearance.

WALLFLOWERS.

About the end of April, or very early in May, is the best time to sow seeds of all kinds of Wallflowers for helping to fill beds next October, after the bedding plants are housed. I would ask for them also in mixed packets—sow them in a bed like lettuce seeds, and transplant them six or ten inches apart, in the kitchen-garden, to be ready by the time specified. I had a batch of them from a sowing I made last June, but they were too small to help me much last October, but they came in for filling up the edges of beds where few plants would do; they stood the frost, and are now coming into bloom, looking quite ridiculous little things; still they were useful, and I shall repeat that June sowing—say about the 20th of the month.

COREOPSIS AND VISCARIA.

The dwarf *Coreopsis tinctoria*, which I mentioned three weeks ago, comes up, I find, as thick as grass, in heat; but as it will hardly come into bloom before the middle of July, I would advise to have it transplanted first in the kitchen-garden, and to remove it just as it is coming into bloom; meantime, the place for it may be filled with something else. There is a very dwarf new variety of *Viscaria oculata*, with flowers nearly scarlet. I heard good accounts of it, but I have not seen it myself—all of them, however, are of the "bettermost" class of easy things to get from sowings in the open ground, at very little cost, compared with their usefulness for late autumn work from May sowings.

PERSICARIA.

The red *Persicaria*, as old as the hills, is another plant from seeds now which marks the gentle cottage-garden more than anything. I once saw three plants of it in the middle of a flower-bed, in Great Malvern, which were five feet high, and as full of bloom down to the ground as any plant could be. I often tried the plan myself, but never succeeded quite so well; but I know this from my trials, that very few gardeners are aware of the real capabilities of *Persicaria*, and I believe it would pay best if it were planted in a bed of rotten dung, and nothing else.

MANY THINGS.

All the *Leptosiphons* would dazzle one's eyes if they were sown rather thick on a heap of old dung, with only an inch of soil on the top to begin with. *Euchari-dium grandiflorum* the same, yet all its relatives in God-etias, do best in deep, poor, sandy soil, which had no manure for the last four years, but they must have depth. Now, without saying a word about bedding

plants, all these ought to be seen wherever Crocuses, Sweet Peas, or Mignonette are allowed; good patches of them, too, and mixed, patch with patch, in any way one chooses, so there be plenty of them, some coming and some going all through till the frost. It is bad management to see a garden chock full of flowers for six or eight weeks, such as *Clarkias*, *Larkspurs*, *Candytufts*, *Navelworts*, *Pinks*, *Cloves*, *Eschscholtzias*, *Picco-tees*, *Lupins*, *Veronicas*, *Campanulas*, *Everlasting Peas*, *Nemophilas*, *Rose Campions*, *Catchflies*, *Foxgloves*, *Forget-me-nots*, and ever so many more of such kinds—all very well in their ways; but, I say it is bad management to let them monopolise all one's ground, because some run away with the idea that newer and more genteel plants require beds to grow them, and a bed for each sort—No such thing; but on the contrary, it is only in such places as Trentham, or Shrubland Park, where "bedding" is followed to the highest perfection, that one sees the mixed system carried out on equal terms. Not, however, all with herbaceous plants, for that is impossible; but with a mixture of herbaceous plants, from Crocus to Michaelmas Daisies (perennial Asters), with bulbs, from Snowdrops to *Lilium lancifolium*; including all the hardy and half-hardy *Lilies*, the numerous tribe of bulbous *Irises*, and *Gladioluses*, *Tigridias*, *Commelinas*, *Alstroemerias*, *Marvel of Peru*, *Ipomopsis*, *Martynias*, *Mimulus*, *Oxalis*, *Argemones*, *Asphodels*, and *Aquilegias*, with scores more, from pots and extras of the bedding stock; and after all is said, perhaps one-third of the whole in the mixed borders is made up with a selection of annuals and biennials; because, without the help of these, nine-tenths of the mixed gardens, all over the country, are really worth very little, except for about one month at the end of spring, and nearly the first two months of the summer. The chief autumnal flowers being *Phloxes*, *Hollyhocks*, *Dahlias*, and *German Asters*, whereas, ten times as many flowers could be had on the same ground by a judicious system of sowings and transplantings, at the proper times and dates, as I shall continue to explain for a week or two.

D. BEATON.

TREATMENT AND PROTECTION OF BEDDING PLANTS IN THE SPRING MONTHS.

WITH the grouping system of flower-gardening, the management of bedding-plants has been a growing difficulty during the spring months, when glass houses become either too hot or too full, and the reduction of labour, when almost everything requires doing at once, become matters of great importance. Many who can keep store pots of Geraniums, Calceolarias, &c., with each plant having an allowance of something like an-inch-and-a-half square surface, or less than that, during the winter, are sadly nonplussed what to do with them as March and April come. If these store pots or boxes are let alone, the plants will become so thin and attenuated and wire-drawn as to do but little good when turned out in May. If they are honoured with separate potting, and thus grown to some size, there are three difficulties then staring you in the face,—the getting room for these pots to stand under protection of glass; the getting of pots themselves, which, in many country districts, is a serious matter, owing to expense alone; and the getting these pots duly attended to in watering, &c., which, if they are small, and March and April are sunny, are no little considerations, when many other things are demanding greater attention than at any other season of the year.

Such rooted cuttings preserved through the winter, or even struck in spring, and occupying but small space, may be taken from under glass in March and April, and protected safely by various contrivances until the

middle of May, when they may be divided, and placed in the beds at once; but this system, when followed as a general rule, will present you with no striking feature in the flower-garden until the end of July, at the soonest; the plants requiring to make growth upwards and downwards pretty freely before they can reward you with their masses of bloom.

The knowledge that plants so treated in proportion to the time they are kept so thickly in store pots, or even singly in small pots, has led to various modes of planting out in preparatory beds, with more or less satisfactory modes of protecting them. For many years I have been in the habit of thus treating plants for flower-beds that made root-fibres very freely, in preference to potting them; and last season I found that even Scarlet Geraniums so treated, and lifted out of the ground with a small fork, and carried at once to the beds, did as well, and rather better, than those separately potted, with the advantage of economising much labour in watering, &c. In the case of Geraniums, and other things that did not have abundance of fibry roots near home, I had largely followed the mossing system practised so much by Mr. Ferguson, at Stowe; but I found that if the roots had not freely progressed through the moss before planting-out time, the plants, as a whole, did not do so well as those planted out in light, sandy soil and rough vegetable mould.

Our readers will recollect the process of mossing. A small quantity of moss is spread on the left hand, on that is placed a handful of light soil, in which leaf-mould forms a chief part, in this the tiny plant is laid and surrounded, the moss is brought over all, and secured round the earth and its occupant, with strings of matting, or, what I find answers just as well, bruised straw, as found in the long dung that comes from the stable. These little balls are then dipped into water of about 70°, and, when dipped, are planted in a bed of prepared soil, or are merely set together and soil sprinkled among them, the object being to secure a ball at planting time to each plant. If a little artificial heat should be placed beneath them they will root freely and quickly. I find that success will greatly depend on the sweetness of the moss and the smallness of the quantity used, and, as before indicated, on the roots appearing all round the outside of the moss before planting time. If the latter is the case, these roots strike into the bed at once, and there is no difficulty. If they do not, success is less certain, and for these reasons;—if you dip the ball of moss in water previous to final planting, the moss is apt to get sour, and the roots dislike to pass through it. So long as the moss is damp, the few roots inside of it will not suffer from drought; but if hot, dry weather ensues, and there are no roots beyond the moss, it would be difficult, without great care, to moisten those within, as the water you apply will edge away from the dry moss, like rain drops from the wing of a duck. However valuable, therefore, the mossing system may be for nurserymen who have to send plants for long distances, and at a cheap rate, we should rarely recommend it to gardeners, who can at once move their plants from their temporary pits and borders to the flowering-beds.

Hence, in gardens where much bedding is accomplished, it is now becoming very common to have temporary earth-pits, such as are dug out for a wide bed of Celery, the bottom of the bed is allowed to remain firm and hard, after shovelling out the crumbs of earth, and on this placing three or four inches of rotten leaves, burnt earth, and sandy drift, in which the plants are turned out separately, and then protected with glass sashes, if come-at-able; but, as is more generally the case, with mats, straw, hurdles, &c.; of course, where there are plenty of glass lights, either for regular pits, or these makeshifts, there would be little difficulty. In

these days, even in the largest places, there is little glass to be spared, in general, for such a purpose. Amateurs, for whom we chiefly pen these observations, have still less of that valuable commodity to spare; and yet they are as anxious about their few beds as the gardener of a nobleman about his many parterres. The great drawback to opaque coverings of any sort for plants in such circumstances are two-fold. First, if kept on, the plants get weakened from a deficiency of light; and if in a fine, sunny day they are removed, very likely the sun is too much for them, or the air, though the sun be shining, is so dry and cold as to injure the plants quite as much as keeping them nearly in the dark would do. This evil is felt even by gardeners, who, by their presence in the place, can humour the plants according to the necessities of the case; but how great the risk, when, as in the case of many of our best friends, the plants must be left to shift for themselves as best they may during the most important hours of the day, or depend upon the care of a boy or girl employed for many other purposes about the house. I may take this opportunity of saying, that in such cases, I have met with acts of attention to watering and air giving, and air taking away, that would have served as a model to many a young gardener; the concerns of a household, though faithfully attended to, being quite compatible with attention to Radishes, Cucumbers, and flowering plants. The young person who can do all this, be he lad, or be she lass, shows the possession of mental concentration and expansiveness, strikingly in contrast with those quiet, plodding young men, who never can hold more than one idea, or attention to one duty, in their head at one time. Though such men and women assistants ought to receive every encouragement from their employers, and be duly valued and esteemed for their worth, any mode that would lessen the labour of gardeners generally ought to be duly chronicled, however simple the mode employed; and, after due consideration, I think I cannot do better than introduce to our readers the simple manner of

PROTECTING BEDDING PLANTS AT COURTEEN HALL.

The readers of this work are aware that I have already introduced some of the Peaches of my friend, Mr. Gardiner, to their attention. There are few places where a flower-garden is so well filled, and with such little assistance from glass, and with such economy in labour. I consider his simple, economical system to be such a good one, that I will run the risk of getting a scolding—by letting all the world know about it.

The young plants are placed thickly in boxes or pots in the autumn, and kept cool all the winter. Many are also propagated in spring, and gradually hardened off. It would be impossible to keep these rooted cuttings long in a healthy state so thickly packed together after the sun had gained strength. Mr. Gardiner has no glass to spare to put them under, and if he were obliged to water such numbers in small pots, he would find an over-reaching of his labour power. By the month of March he begins to thin his plants, by removing the hardiest of them into his cold pits, and so going on, removing the tenderest last. The chief peculiarity of these pits is, that they are covered with *calico* during the day, and with extra covering at night. Any sort of pit would do, formed of earth, turf, brick, &c. Mr. Gardiner forms the walls of his of straw set on end—much in the same way as those I made mention of at Wilderness Park last season. These may range from nine to twelve inches in height, in front and from twenty-four to thirty-six inches at back. The greater the difference between the back and the front, the more perfectly will the calico throw off rains. In forming such pits, posts are driven into the ground,

back and front, and on these a rail is firmly nailed. The straw, of a good thickness, is then set upright, and firmly secured by strong cord, or hazel or other rods, passing longitudinally, inside and outside, and firmly secured by cross loops of cord, fastening the inside and outside rod or cord together, holding the straw firmly between them. I have seen such straw walls last four or five years, with the prospect of remaining much longer. Had I the chance, however, I would, for myself, prefer turf walls. These straw walls, however, are what Mr. Gardiner uses. His calico is bleached, because it lets in more light, and, as near as he can get it, two yards wide: at that width it costs about 8d. per lineal yard. Strong, unbleached calico may be procured at nearly one-third less, but Mr. Gardiner thinks it would be too dark. It will be evident that the sloping line of the pit must not be quite so much as the width of the calico. Mr. Gardiner has no cross pieces to sustain the calico; it is cut into pieces of five yards in length, one side is firmly tacked to a rod, some one-and-a-half or two inches in diameter, the calico is then stretched as much as possible, and the opposite side tacked to a similar rod. Every five yards, therefore, in length is moveable; one rod being fixed to the rail or posts behind, by means of two or three strings, passing round as many pins or nails, and easily tied and untied; the front rod is fastened in a similar manner, and the calico roof of the pit is complete; the tightness with which the calico is kept enabling it to throw off heavy rains, especially if there is a good descent from back to front. Frost is guarded against by straw covers, made much in the same way, but thicker than was lately described, laid over the calico, and resting on the back and front rails of the pit. Your pit, therefore, may be of any length in proportion to the pieces of calico. Mr. Gardiner has used these calico covers, I think, for three years, and they seem none the worse for wear. Now, for what may be called the peculiarities of the system.

1. The pits are made to catch as much of the sun's rays as possible.

2. The bottom of the pit is hard, and is covered with a sufficient thickness of a light compost, consisting of sandy loam, charred refuse, burnt earth, and leaf-mould.

3. In this compost, commencing with the hardiest things in March, the young plants from store pots are planted out, giving each two or more inches square, according to their vigour and mode of growth; and Geraniums, and everything else, are lifted in May, in fine condition for the flower-beds.

4. The calico covering, until it approaches planting time, and thorough hardening off is requisite, is kept on night and day. I have already mentioned how extra covering is given at night. The calico admits sufficient light in hot days, and keeps out the extra heat that would scald or injure. In cold days, or when there is a cutting east wind, the plants are presented with enough of light to keep them healthy, and the cold is kept out.

5. Little watering, or other attention, is required, from the day the young plants are inserted until they are removed. It may safely be said, that the attention necessary will not be a quarter of what it would be if each plant had a small pot under glass.

6. Even Scarlet Geraniums, so treated, feel the removal to the beds less than others that have become pot-bound, and required, therefore, a disentangling of the roots previous to planting.

7. This mode requires even much less attention than if the plants were secured with glass sashes over them; and independent of the economy, I believe Mr. Gardiner prefers his calico covers to glass for such a purpose.

If desirable, such covers could be made available for general purposes of shading in summer and protecting

in winter; but, of course, if constantly used they would not last so long. I have tried unbleached calico for a similar purpose, and liked it well enough; and though it is brown instead of white, I thought, when trying some the other day, by holding them up alternately between the eye and the sun, that the one allowed as many rays of light to pass as the other. Mr. Gardiner, however, decidedly prefers the bleached. There is a natural tendency amongst us to try and improve even upon a good thing, and no doubt many will be thinking of several schemes for rendering the calico more clear and lasting. If they will be advised, they will let well alone. Mr. Gardiner tried oil, and several other mixtures, and they all had one effect—accelerated the decay and the rotting of the cloth. I have had several trials myself, from Whitney's composition downwards to oiling and waxing; but I found, that on the score of economy, and ease in handling and using, the untouched cloth was the best. Many of the modes of preserving such fabrics are just as useful as painting green, sappy wood,—worse, much worse, than labour lost.

R. FISH.

GLORIOSA.

I NOTICED, lately, that some reader of THE COTTAGE GARDENER was enquiring about the culture of a species of this genus, *Gloriosa Plantii*; and as they are all desirable plants, perhaps the information will be useful not only to our correspondent, but to all our readers that cultivate stove plants. The information will be seasonable also, for now is the time to repot the plants.

Some fifteen years ago, I was gardener to G. Young, Esq., of Sheaf House, near Sheffield. When there, I had a tuber given to me by Mr. Wormald, of Sion Hill, near Thirsk, in Yorkshire, a gentleman that was a very successful cultivator of stove plants. This tuber, I expected, was the old *Gloriosa superba*. I grew and flowered it, and it proved to be quite a distinct plant. The flowers were of a clear buff-yellow; the petals were much broader, and nearly flat, and it bloomed more freely from smaller tubers. I named it *G. flava*, but I have every reason to believe that it is the same variety that was sent from a continental nursery, about seven years since, as a variety of *G. superba*, under the name of *G. Leopoldina*, for which a high price was charged. I mention this circumstance to show how we are, now and then, foolish enough to purchase plants that are already in the country under a different name. It shows, also, that botanists ought to be very cautious in changing the names of plants, for such changes frequently lead plant purchasers astray.

The following are the names of the species as now recorded.

GLORIOSA NEPALENSIS (Nepaul).—Flowers yellow; appearing in June; height two feet. Introduced in 1825. A greenhouse species, but not much known.

GLORIOSA PLANTII (Mr. Plant's).—Bronze-yellow; height four feet; from Natal, in Africa. Sent over by Mr. Plant, formerly gardener to S. Schroeder, Esq., a large grower of Orchids. Mr. Plant went out to Natal to collect objects of Natural History for a gentleman, and plants on his own account. This handsome species of *Gloriosa* is named in honour of a zealous collector, a good, practical gardener, and a very quiet, estimable man.

GLORIOSA SIMPLEX (Simple).—I only know this plant by description. It is said to produce blue flowers; grows two feet high; and is a native of Senegal. I should like to see it, but I fear it is extinct in this country.

GLORIOSA SUPERBA (Superb).—Flowers orange, red, and yellow; petals very much twisted, like a corkscrew;

grows six feet high. A twining plant, with leaves twisted at the base, and tendrils on the points; a fine plant. Introduced so long since as 1690.

GLORIOSA SUPERBA LEOPOLDINA. (King Leopold's).—Flowers yellow; petals nearly plain, and much broader than the species; grows six feet high, and is a twining climber.

GLORIOSA VIRESCENS (Greenish).—Flowers orange, tinted with green; grows four feet high, and blooms in August. Native of Mozambique. Introduced in 1823.

Such is the brief history of this genus and its species. The name is unmeaning—*Gloriosa* (glorious). There are hundreds of flowers that are more glorious; however, the name is established, and so it is better to allow it to stand.

Culture.—They are all tuberous-rooted plants, and die down through the winter; hence, they take up little valuable space whilst at rest.

Soil.—Like most of the tribe to which they belong (Lily-worts), they love a rich soil. I found them to grow well in a compost of fibrous peat, light loam, leaf-mould, not too much decomposed, and two years old cow-dung, in equal parts, and all thoroughly mixed, but not sifted, adding, also, a liberal mixture of roughish, sharp sand. This compost should be used neither wet nor dry.

Potting.—As these plants require a rest for nearly half the year, the season for potting is any time in April; or if there are on the place many bulbs, they might be potted at twice,—one batch about the end of February, and the other at the end of April. This would prolong the season of bloom. Some tubers are as much as six inches long, and these large ones are generally double, something like a pair of fingers united at the base. These double tubers must be allowed to remain so; for the least bruise, or breakage, will cause them to rot. Such large tubers should have pots in proportion; at least ten inches diameter. To make a splendid specimen, three or four of these large tubers may be put into a fourteen-inch pot. Smaller bulbs should be put into pots of a proportionate size. The old bulbs perish every year, so that it is only the bulbs made the previous year that will grow. In potting them, observe the end of each where it has been joined to the parent; place that end lowest. The top of each should be, at least, (if large) four inches below the surface; small ones need not be so deep. Drain the pots perfectly, and then turn the old ball carefully out of the pot, and gently separate the soil till the tubers are all found; then pot them, and place them in the stove, giving no water for a fortnight; then give just enough to moisten the soil, and no more will be required till the shoots appear above the surface. The quantity may then be increased more and more as the plants advance in growth; the most liberal supply should be just before the flowers open. The tall, twining growers will require support; the most simple, and yet most effectual, that I ever found out, was, for large plants, four or five strongish sticks, five feet long, painted green, and planted in a circle near the edge of each pot; the shoots, as they grew, were tied round and round the outside of this circle of sticks, and by the time they reached the top of them they were in full flower. Weaker plants had a less number and shorter sticks in proportion. As soon as the leaves begin to turn yellow, the quantity of water should be reduced greatly; and when they are quite yellow withheld entirely. They may then be cut down, and the pots laid on their sides in any place where frost and damp cannot reach.

Propagation by Seed.—Whoever wishes to have a great quantity of these showey plants should allow the seed to ripen, and sow it in early spring, in wide, shallow pans, following the same process in placing the young bulbs to rest through the winter; then repotting, and growing them on till they are strong enough to flower.

By Division.—In turning out the pots full of bulbs many small ones may be seen united slightly at the base to the large ones; these almost divide themselves; or, at least, a very little force of hand will separate them. In the course of a few years, any place possessing one plant and growing it well may have a very good stock.

Gloriosa Plantii requires treating exactly like *G. superba*; and the rest, excepting *G. Nepalensis*, which is a greenhouse species, nearly hardy. T. APPLEBY.

WOODS AND FORESTS.

THE SCOTCH PINE (*Pinus sylvestris*).

(Continued from page 27.)

NEXT to the Larch, among coniferous or resinous trees, this is the most useful in Great Britain as a timber tree. It has one advantage over the Larch, and that is, that its leaves are persistent or evergreen. It is a tree that under favourable circumstances attains ninety feet in height. It grows in a conical form, the leaves are of a dark blue or grey, the bark rough, and of a dark brown colour. It flowers in May, and the cones containing the seeds should be gathered in November or December. It is remarkable as being the only Pine that grows wild in Britain. Its seeds drop in the native woods and come up spontaneously, thus furnishing a succession of trees without any care by man.

Varieties.—When I visited Enville Hall, I noticed in the woods there three distinct varieties, and in my description of that fine place I described them in THE COTTAGE GARDENER. Mr. Sang, a good observer and an excellent writer, is, or was, a nurseryman at Kirkcaldy, in Fifeshire. I saw him and his nursery about seven years ago, and found a plain, unassuming, and very intelligent man. He says (in a work that he edited, entitled the *Planter's Kalendar*, published in 1812, at Edinburgh), "The variety of the Scotch Pine most commonly cultivated is the least worth the trouble. The variety he names as the *P. sylvestris*, var. *montana*, is the red wood of commerce; even young trees of this sort show the colour in the wood, and become full of resin very soon." The variety preferred by the celebrated botanist, Mr. George Don (of Forfar, in Scotland, who had a good sale botanic garden there), is distinguished by the disposition of branches, which are remarkable for their horizontal direction, and for a tendency to bend downwards close to the trunk. The leaves are broader and shorter than in the common kind, and are distinguishable at a distance by their much lighter and milky-green appearance; the bark of the trunk is also smoother than in the common kind; the cones are thicker, and not so much pointed. The plant is more hardy than the common sort, grows freely in almost any soil, and sooner makes timber. Surely, if this be all true, the nurserymen in Scotland should see to it, and give strict orders to their seed-collectors to gather no other variety. I have not the least doubt but the same sort grows in England, though I never noticed it; but I strongly suspect it may be found in the Scotch Pine woods beyond the Virginia Water, on the road to Chobham.

Uses.—Every carpenter can tell us that there is red deal and white deal; but very few, even respectable timber-merchants, could inform an enquirer what species of tree produces the different woods. This shows how ignorant we are of "common things." The red deal is the timber of the Scotch Pine, and every joiner or builder knows it is greatly superior to the white. It is excellent for all building purposes, resisting dry rot and wood-boring insects. The Highland

Pine, Sang states not to be inferior to any imported, either in durability or cleanness. The common sort, or even the best, grown in the Lowlands is only fit for roofing sheds, lining carts, making laths for roofs, or packing-cases and fire-wood. The natural, or self-sown tree, in high situations where its growth has been slow, and, consequently, the wood solid and sound, is equal to any timber for almost any purpose.

Planters make use of this tree to a great extent as a nurse-tree; that is, they plant it to shelter the Oak and other hard-wooded trees whilst they are young. For this purpose, on account of its being evergreen and growing quickly in almost any soil, it is invaluable. It bears the blast of strong winds better than any other tree I know, and grows very rapidly. The only fear is, that if the thinning them out is neglected, the nurse becomes a robber, and smothers the more valuable trees in soils where its timber is of the inferior quality. The thinning of forests in time is sadly neglected; it is the crying sin of most owners of woods. Many proprietors have planted largely; but they or their heirs are, I might almost say, stupidly indifferent to after management. It is very grievous to a right-thinking, observing man to pass through the country and see hundreds of acres of fine young trees, from twenty to forty feet high, killing each other for want of proper thinning in time.

Soil and Situation.—To produce the best timber of this tree the soil is almost a matter of indifference. In many parts of the Highlands of Scotland, where the soils are of almost every kind, from sand to clay, with a rubble or rocky subsoil, this tree will grow and flourish; but the best timber is produced in mountainous regions. We may see fine trees growing in shallow peat or moor earth, where almost any other tree would not make more than a stunted bush. I noticed this particularly in the black, sandy hills about Enville Hall, and also on the large district of country within ten miles of Bagshot. There are thousands of acres of such soil in Derbyshire, Yorkshire, Lancashire, and Cheshire, now a barren wild, that would grow this excellent timber to the highest perfection. If these districts were all planted immediately, our grandchildren would have plenty of useful timber for their doors, window-frames, and boards for rooms. We should then not have to depend either so much upon the north of Europe, or any other part of the world; and besides that, the appearance of the country would be greatly improved, and rendered warmer by the shelter these woods would give to the corn-growing valleys in their neighbourhood. When will our government, and the great landed proprietors, awake from their lethargy, and go to work in earnest upon the barren places of our beautiful country, and plant them with useful timber, according to the capability of the soils and situation? The expense would be considerable, but the cash would not be lost. It would be earned, and wisely used by nurserymen, planters, and labourers, and by them would be circulated throughout the country. We should have less poor-rates, and less necessity for so many of our able-bodied peasantry emigrating to a foreign land, in search of that bread which an over-abundant, work-wanting population cannot obtain, even in this flourishing country.

T. APPLEBY.

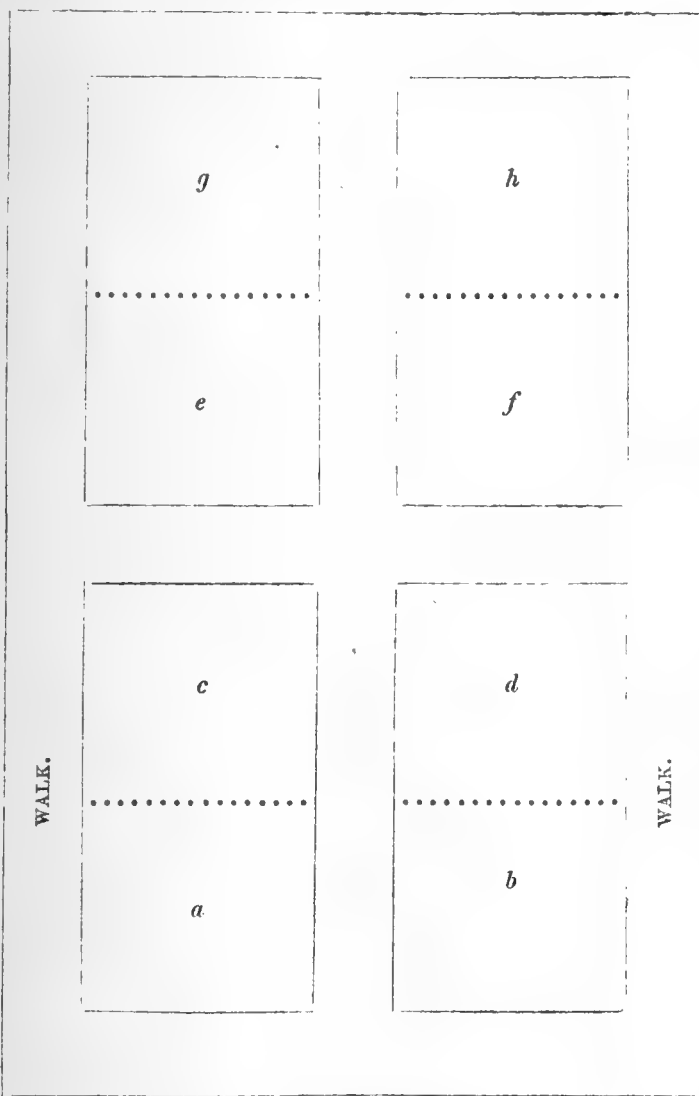
(To be continued.)

GARDENING FOR THE MANY.—MAX.

KITCHEN GARDEN.

ALTHOUGH the Garden productions of the early part of the month are usually more meagre than at any other season, yet the general appearance of the garden, with the many objects of promise in it, combined with the

absence of all rubbishy old crops, gives it an air of neatness which it rarely has at any other season. Large breadths of *Onions*, *Carrots*, and other seedling crops will begin to show their respective tenants in a way that seldom fails to interest the most apathetic observer of natural productions, while the various sizes of *Peas* and *Beans*, rising over each other's heads like the offspring of some thriving couple in a rural district, give tokens of usefulness at a no-distant period; while the general aspect of the fruit and other trees is supposed to be good, the whole *assemblage* tends to give an air of neatness, order, and promise to a garden which more than compensates for the lack of productions fit for immediate use. But this interest does not exist when the garden is not in good keeping, but expecting it to be so, we have alluded to it as such, and having made these few remarks more in a complimentary than instructive manner, will now go into the details of the kitchen-garden—in continuation of the remarks made at page 495, Vol. XIII, and adopting the same figure or model as our line of operations.



- a.—This division being *Strawberries*, some attention will be wanted here, for should the season prove a very dry one, and the situation of the garden in question is dry also, water must be administered in rather a liberal way. I feel sorry to recommend it, and would not advise it in all places, but where the depth of soil is not great, and a dry, hungry gravel underneath, there is no alternative; but be sure and give a good soaking whenever *Strawberries* are watered, and let some shading be adopted to prevent evaporation immediately the watering is accomplished. Short grass mown from the lawn will do this, and being tolerably plentiful now may be used as seems necessary. The *Raspberries* will not require much attention for some time.
- b.—This being partly planted with *Potatoes*, part

Cauliflowers, and a small space left for more *Cauliflowers*, another row of the latter may now be planted, and the ground well stirred amongst the first planted; and the same may be said of *Potatoes*. The latter may be earthed up towards the end of the month, and of course all weeds must be carefully cleared away.

- c.—This being under a permanent crop is now one of the most profitable plots in the garden. *Asparagus* beds, while in bearing, must be carefully cut all over, until a fixed time for ceasing—i. e., the small or spray must be eat as well as the good heads; a little salt may be sown on now and then, and if liquid-manure be plentiful, that may also be used. Dress up the *Sea-kale* beds, and dig slightly between them, and cut off most of the flowering heads that show themselves towards the end of the month, but do not remove all, for the plant, if strong, will produce more. *Rhubarb* will be in full use, but the late winter has cut down the *Artichokes* very much, so that early heads will not be plentiful this season.
- d.—*Onions* being the principal crop here, little need be done except keeping them clear of weeds, and drawing the *Radishes* away in time; if they be sown in drills, they will want the ground stirred between them whenever the weather allows it, and whether in beds or in drills, they must be well thinned in time, otherwise it is vain to look for a good crop.
- e.—The different crops of *Peas* being here, they must be staked as required, and all weeds kept carefully away. Two more crops may be sown this month, or rather a crop must be sown every fortnight. The *Champion* or *Surprise* will do as well as any. Reserve another sowing for June, but after the middle of June, I think it would be imprudent for the cultivator of a small place trusting to their doing well.
- f.—If any mishap befell the first crop of *Dwarf Kidney Beans* sown here, which is not unusual, sow again immediately after; or rather, it is better to foresee these things, and sow a small quantity every week after the middle of April, until they be established. About the first of May is soon enough for *Scarlet Runners*, and again at the middle of it another crop may be put in. Some slight protection may be given to the *Dwarf Kidney Beans*, when they first make their appearance, as they are very tender.
- g.—The *Carrots* sown here will require thinning when they can be handled, but that will not be before the end of the month, and, perhaps, not then. If slugs trouble them while in a very young state, which they often do when just coming up, sow some lime over the beds early in the mornings, say after the first of the month, or before you perceive the plants coming up, for it often happens much of the mischief is done when we see the plants, the enemy's organs that way being keener than ours. Stir the earth between the rows, as also the same with *Beet*, and other things. Another crop of *Broad Beans* may be put in, and the former one earthed up, &c.
- h.—Preserve the first sowing of *Turnips* here from frost, by throwing a mat over them at nights, and sow a little more. Remove the remnants of *Brocoli* and *Greens* that may be remaining here, and dig the ground, applying manure at the same time. Probably a few *Lettuces* may be wanted here; or the first row of *Celery* may want planting out; or it might be, the cultivator has some taste for another crop than what is mentioned above, that we have here a marginal corner for him to fill up at his leisure.

BORDERS.—See to the beds of *Brocoli*, *Lettuce*, *Cauli-flower*, &c., and weed them where wanted. Sow now *Lettuce* of the *Drumhead*, *Cabbage*, *White* and *Brown Coss* varieties, and plant out those of the early sowing. Sow a bed of *Rampions* on the east border, and towards the end of the month prick out *Celery* into a nice piece of well-prepared ground. Examine the wall-trees, and if insects infect the *Peach* or *Nectarine* trees syringe with tobacco-water, and commence disbudding them. Keep all things in order, and the garden will have a tasty appearance.

FLOWER GARDEN AND ROCKERY.

Although, in fashionable gardens, the month of May is a busy one in the Flower-garden way, yet, in the one we now treat of, we expect but little is wanted in the bedding system, which gives so much work elsewhere; but if any *Geranium* or *Calceolaria* plants can be had, let them be planted, by all means, amongst the other plants in the front garden. *Verbenas* and *Petunias* do not answer so well among mixed flowers; for being of a straggling growth they are better adapted for mixing in a bed by themselves. *Cupheas*, *Fuchsias*, and *Ageratums*, may be planted at pleasure, and now and then little patches of the *Dwarf blue Lobelia* as well as the tall *Scarlet* one. *Dahlias* may also be planted when wanted; but there is not space for many, therefore dwarfish ones will suit best. Any overgrown plants from the windows may be planted, and their places supplied by striking young ones. Plant out, also, any annuals that may have been sown in warm places; *Stocks* and *German Asters* being excellent for that purpose. Keep all Lawns in nice order, the grass well mown, and everything clean and orderly, and water only the newly-planted things, unless the season be exceedingly dry, in which case, a sound soaking will be beneficial, taking care, afterwards, to prevent the ground caking at top. Keep adding to your list of flowering plants, and propagate any favourite one by cuttings or offsets. The *Dielytra spectabilis* and *Yellow Alyssum*, being two of the most conspicuous plants we have, strike freely when put in early. Some shady corner may be rendered light by the addition of sand or charcoal dust; and the cuttings put in three inches apart will speedily be plants fit to plant out. Tie up only such plants as will not support themselves; but the *White* and *Purple Rocket* will usually do so, and many others. Sow some *Brompton* and *Queen Stocks* at the end of the month, and a little *Mignonette* seed may be scattered over the bed then to succeed that sown earlier.

FRAMES OF CUCUMBERS.

This will be in full bearing now, and, consequently, will be full of vine, which thin by cutting away all weak long-jointed shoots; admit air freely, and give water abundantly, and towards the end of the month harden the plants off by gradually admitting more and more air until they will bear full exposure by the end of it, when the frame may be removed to another bed prepared for it, when *Melon* plants are in readiness to turn out, the *Melons* being reared in the *Cucumber* frame during the early part of the month, but protected at nights by some handlight or other covering put over them when the hardening of the *Cucumbers* is going on. A stiffer soil will suit *Melons* better.

J. ROBSON.

ALLOTMENT FARMING.—MAY.

As this is a month when vegetation begins to make rapid growth, it is necessary to keep the hoe busily em-

ployed for some time amongst the young crops. The advantages of the *drill system*, in preference to the broadcast, will be now perceptible in the facility with which the hoe can be worked between the rows, and to thin out the young plants to regular distances apart until they acquire sufficient strength to cover the ground and exclude all weeds. As it is probable that we shall now have a continuance of dry weather, it is advisable to stir the soil between the growing crops, and to *mulch* with short grass or any other substitute, to prevent evaporation. When there is an indispensable necessity for watering, if the plants droop, a liberal soaking of water will do more good than many and frequent sprinklings.

ROTATION OF CROPS.

It is a subject of paramount importance to know in what manner vegetables perform their functions to maintain a healthy existence; how far they are influenced by atmospheric agents; and to what extent the soil ministers to their wants. It was the general opinion of the last and preceding century, that the atmosphere contributed little or no advantage to the production of fruits and vegetables, unless the benefit of showers—being perceptible by the more luxuriant growth of the crops on which they descended, and the greater increase and better ripening of fruit visible from exposure to the genial influence of the sun,—may be supposed to indicate some slight knowledge of the advantages of such influences; but to specify the qualities of the agents by which such changes were effected has been left for modern science to explain. Within the present century there have been many plausible theories suggested by some clever men, to explain the qualities of the atmospheric agents by which vegetation is influenced. Their views had been impeded by some thick mists that they could not see through, until Liebig penetrated them, and explained the whole phenomena so clearly, that all gardeners can now receive valuable instruction from the sound reasoning and the well-attested facts detailed in his writings. That manures were known to possess fertilising properties is evident from the perusal of the works of the many authors who have written on the subjects of gardening and farming. Tull had taken great pains to prove that by frequently stirring and pulverising land, and by deep diggings and ploughings, a soil may be made to produce better crops, and a succession of them, without any manure, than land neglected in such particulars, but supplied with manure, could do. The benefit derived from frequently stirring the soil around growing crops is generally admitted. Such benefit is to be attributed to the increased pulverisation of the soil, the more free admission of air, and the more certain destruction of weeds; but the nourishment that each crop extracts from the soil must be supplied by manures, organic and inorganic substances. A knowledge of the analysis of the plant to be grown, specifying the constituents of which it is composed, will give us the best clue to the application of the ingredients which it requires for its perfect development. It is well known that the second crop of the same sort of vegetables, grown on the same soil, will not be produced in the same perfection as the first crop. It is affirmed by some that an excrementitious matter, thrown off by the roots, will act injuriously on the same sort if immediately following; in short, that such root-excretions will act as a poison to the succeeding crop. But it is certain that what was formerly attributed to root-excretions is now proved to be caused by the crop extracting from the soil the different ingredients necessary for its existence and maturity. By supplying the soil with the particular materials of which the plant is composed, we could then continue to grow the same crop on the same piece of ground for many years, the influences of air, heat, light, and moisture being the same. But until that more perfect knowledge, to which we are advancing rapidly, is attained, we must continue the rotation system of cropping. By that system, the long tap-rooted vegetables, which extract nourishment from the soil at some distance from the surface, are succeeded by vegetables with fibrous or widely-spreading roots, which extend more closely to the surface; the ingredients extracted by one is no detriment to the other crop.

KIDNEY BEANS.

SCARLET RUNNER BEANS.—This prolific and useful crop to the cottager should be sown the first or second week this month. The selection of a favourable situation we leave to the cottager himself, who is best able to judge where it will be most desirable for him to grow them, either to form an arbour in his allotment, to hide unsightly objects, or to cover his cottage-porch. The greatest produce may be expected when sown in circles, two feet in diameter, and four feet apart, tied to stakes four or five feet high, and frequently stopped during their growth.

DWARF KIDNEY BEANS.—Sow the first week for a full crop in July.

CABBAGE WORTS.

CAULIFLOWERS.—A little seed should be sown about the middle of the month. The crop will come into use in October.

BRUSSELS SPROUTS, BORECOLE, AND SAVOYS.—A little seed of each should be sown for the last crops, and of German Greens to come in for spring use.

TRANSPLANT Lettuces, Cabbages, Brocoli and all other such things from the seed-beds on light soil, with rotten dung beneath, into which they emit fibrous roots, and can be safely moved with bulbs in showery weather.

VEGETABLE MARROW.

This delicious vegetable is useful for culinary purposes in every stage of its growth, and is generally appreciated by the cottager. The seed should be sown early in the month under a hand-glass, with a very gentle bottom-heat, and may be transplanted in showery weather, about the end of the month or the beginning of June, into good rich ground. When the runners have extended a few feet, and have been stopped, and again made shoots, if they are pegged down at the joints they will soon take root and flourish, if copiously supplied with water, or, what is better, with liquid-manure, in dry weather.

RIDGE CUCUMBERS.

If the cottager is ambitious to grow a few to give some degree of importance to his salad, and is prepared to devote a little extra attention to their cultivation, it is necessary to be provided with a small heap of dung that was frequently turned over until the rank steam had entirely evaporated, and with a few hand-lights, or a small frame, to protect the young plants, when they are turned out of the pots into the soil. The length of the trench, which should be three feet wide and eighteen inches deep, will depend upon the number of hand-lights, or the width or length of the frame; it should then be filled with the dung, and in a few days hillocks of light rich soil, one foot thick and three feet apart, should be made, and the plants, two in a pot, that had been stopped beyond the first rough-leaf, should be turned out of their pots about the middle of the month, and planted in the centre of each hillock, covered with the hand-lights, and shaded for a few days. When they have established themselves, and begin to grow, air should be given, and frequent earthings to the plants as their roots appear on the sides, by which means they grow better than when planted at first in a large body of soil. Successful management will depend upon proper attention being given to stopping and thinning the shoots, and to regular and careful supplies of water.

TURNIP CULTURE.

The best season for sowing *Swedish Turnips* is from the middle of this month, in high, exposed situations, and about the middle of June, in low, warm situations. *Aberdeen and Dale's Hybrid* from the middle of June to the first week in July, and for *White Rounds* any time in July. If the ground had been dug in the autumn, and thrown up into ridges, as practised by gardeners, in straight lines, about twenty-four inches from centre to centre, it will be in a good, mellow, and pulverised state for receiving the seed; but if it had not been then done, the sooner it is done the better, and when the time arrives for sowing, the manure is spread between

the ridges and covered by splitting them with the spade, breaking all clods, and patting down the surface of the drill with the back of the spade; a shallow drill is then to be drawn on the crown of the ridge with the corner of a hoe, in which the seed may be sown with the hand, or from a bottle with a bit of goose-quill inserted in the cork, and then covered by drawing the back of the rake along the drill. A little guano or fowl's dung scattered along the drills will excite the young seedlings into rapid vegetation; when the rough-leaf is formed, the crop is safe from the attacks of the turnip fly, which in some, and especially dry, seasons, commits great havoc amongst the young plants. The after-success of the crop depends upon thinning the plants from ten to twelve inches apart as soon as the rough-leaf is an inch broad, and upon keeping the ground quite free from weeds. If vacancies occur, they may be filled up by sowing the other and later sorts described.

BUCK-WHEAT.—This grain is useful for feeding poultry and pigs; it will grow, if sown broadcast in the beginning of the month, on any patch of inferior land on the allotment.

CULTIVATION OF FLOWERS.

Although I have not in my preceding communications on Allotment Gardening vouchsafed a hint on the cultivation of flowers, I do not see why the delightful amusement and recreation of rearing and tending the most various and interesting productions of nature should be excluded from the cottager's enjoyments. Although there are many who look back with a wistful eye to old habits and old times, who prefer the wild-rose of the hedges, with its sharp and prickly thorns, with its poor and ragged blossoms, to all the advantages which cultivation has given to the rich progeny of more beautiful sorts, and who would confine education for the cottager to the narrow limits of being only able to read sufficiently to spell through his Bible, or to know sufficient of figures that he may not commit a mistake when sent to the neighbouring market by his master; nevertheless, the time is approaching when the gardener will be more at home amongst the cottagers, cultivating their faculties, unfolding new capabilities, elevating them to a level with prouder flowers, assisting them to rise above the earthiness around them, and to take a loftier station as moral and social members of society.

The **HONEYSUCKLES** and **CLEMATIS** on the cottage-porch should never be allowed to become entangled in their growth before they are trained.

The **FUCHSIA**, beautiful in its pendent habit of growth, beautiful in the vividness, variety and distinctness of its flowers, and beautiful for many months in bloom in the cottager's window or flower-garden, requires equal parts of turfy-loam and leaf-mould, with a liberal sprinkling of sand, and to be now shifted into larger-sized pots with good drainage; to be carefully supplied with water during the growing season, and occasionally with liquid-manure when in bloom.

DAHLIAS.—Whoever have been so fortunate as to save their old roots during the last severe winter should start them as soon as possible into growth; by placing them in any warm, sheltered situation, and protecting them from frosts at night, they will soon begin to vegetate; when two or three inches long, they may be divided into pieces, retaining an eye to each. Towards the end of the month they can be planted out with safety into some good, rich, well-dunged soil, and trained up with three or four stems, tied to stout stakes as they advance in growth. They require a liberal supply of water during dry weather, and the flower-stalks to be thinned to produce large blooms.

W. KEANE.

NEWCASTLE-ON-TYNE EXHIBITION OF POULTRY.

For some time past the impression seemed to extend itself, that the taste for Poultry was gradually decreasing in public estimation; the Exhibition held, however, in the Corn Exchange, at Newcastle-on-Tyne, on Wednesday and Thursday, the 11th and 12th of April, gives the most positive and direct refutation to such an opinion. It was not

only attended and supported by almost every family of distinction in the surrounding neighbourhood, but the receipts from sales very far exceeded the anticipations of the most sanguine; indeed, out of four hundred pens, a very considerable portion changed ownership at prices evidently intended by the exhibitors to prove prohibitory. No doubt exists, however, that the severity of the past winter damped, during its continuance, the ardour of many poultry amateurs, and the present genial spring weather has again tended to the sale of "brood stock" for the coming season. The building is peculiarly well suited for the purposes of a poultry exhibition, the light being alike in all parts, and the ventilation all that could be wished for. From the fact, that a poultry show held about the middle of the month of April *must necessarily interfere with the laying hens*, we, ourselves, had anticipated that but few really first-rate stock would have competed; it must, however, be candidly acknowledged such was not the case at Newcastle, for the bulk of the specimens were such as would have added credit to almost any exhibition, and for general condition and plumage have certainly never been excelled. Another feature that no doubt added considerably to the well-being of this show, was the well-known partiality of the committee themselves to the objects entrusted to their supervision; and, certainly, our meed of praise is willingly tendered for the care, cleanliness, and order that universally prevailed throughout the whole show; and no doubt, when we inform our readers that up to a late hour on the evening previous to the day of opening the Corn Exchange had been occupied for its accustomed purposes, the difficulties that had to be surmounted will be readily appreciated by every one, and the energy displayed as fully acknowledged. Three very handsome, weighty, and *really useful* Silver Cups were also presented (properly engraved at the expence of the Society) to the successful competitors in Black Spanish, Grey Dorkings, and Cochins, the latter altogether irrespective of colour. These prizes excited much emulation, and a good display was the natural consequence.

The *Cochins* bore strong evidence of careful breeding, and the conformation of many of the successful birds fully proved that their owners were quite alive to its importance, and that colour *alone* should ever be held subservient to this far more weighty feature; nevertheless, few pens of this variety changed hands, the bulk of sales being effected in the Grey Dorkings, and some of the really fancy birds. The sales here, as we have before stated, were very numerous, and the prices obtained highly satisfactory; the agriculturists in the neighbourhood evidently appreciating the many excellencies of the *Dorking* fowl for general purposes, where it can be readily allowed a *sufficient* and *suitable* range, for otherwise disappointment will *invariably* ensue. The attention that had been devoted to them was strongly developed in the contrast (by weight) of many birds here exhibited with those shown in bygone days, not a few weighing from nine to ten pounds each fowl, and the matching for colour, in some of the pens, was unusually successful; indeed, throughout the kingdom, the improvements in general character of the *Dorking* classes, during the last few years, must be generally acknowledged to be steady and progressive, and is, perhaps, one of the strongest arguments that could be adduced of the really useful influence of the poultry movement.

The *Spanish* fowls were certainly not so good as we have frequently witnessed at other exhibitions, many of the specimens showing evident symptoms of frost-bitten combs and wattles; neither was their general condition such as we could have desired, more especially at the opening of the breeding season. It would be well if those whose attention rests more especially on this valuable breed of fowls would devote a little *extra* care, during severe seasons, in their protection from the weather; no fowls show want of condition more positively than they do, nor does it in any variety tend so much to the disappointment of the expectations of their respective owners.

It will, perhaps, not be deemed here altogether irrelevant to state to our numerous poultry friends, that, during severe weather, the combs of the cocks, in particular, are very highly susceptible of becoming "frost-bitten" from being wet with rain and then suddenly exposed to the unusual severity of the atmosphere; in some instances, also, the

Spanish fowls become ulcerated in the combs, simply from being released out of the highly *artificial* temperature of their owner's roosting-house into the pinching influences of a winter morning; such sudden changes, therefore, cannot be too anxiously avoided, and still more so when intended for exhibition, where success naturally is altogether dependant on outward appearances and general constitution. Its ill effects in the production of *depression* in the comb is also as fully ascertained, and it is well known that the *highly* bred Black Spanish are by nature but *ill-suited* to struggle with the trials of such a truly Canadian winter as the past one. We, therefore, hope the great importance of the subject to Spanish exhibitors will be considered a sufficient apology for the present digression, whilst, perchance, in some cases, it may tend to prevent similar mishaps to others. Only one prize was awarded in the *Brahma* class, though nine pens competed; these were a tolerably regular pen of dark birds, and were pea-combed. In *Malays*, not one single entry for the prizes offered took place, undoubtedly attesting them to be no particular favourites in the northern counties. In the *Game*, on the contrary, the classes were well represented, the premier award being secured by a very beautiful pen of Black-breasted Reds; the second to a very passable pen of Duckwings.

We now have to report on the *Hamburgs*, a variety on which so much counter-statement has of late years been advanced. The Pencilled varieties deserve no especial comment, many of the pens containing good fowls, but not such as to merit particular notice. Newcastle, and the whole of the surrounding neighbourhood have, however, been long celebrated for their Spangled Hamburgs; and here they were strong both in numbers, and also, in many instances, in excellence, but the introduction of "hen-tailed" cocks destroyed the hopes of several competitors; the winners were all of them fowls in which the ample tails (so strongly denotive of character in a *Hamburgh* fowl,) was fully developed; and we were not a little interested by the admission of an exhibitor, whose continued successes have frequently been noticed in the columns of this periodical, "that, although unsuccessful, he was quite satisfied; that he never would again keep a 'hen-tailed' male bird, nor would he have done so had he obtained the Society's premiums; for, during the last two years, he had tested several, and that whilst they were almost entirely unproductive, he never had obtained (from the few raised) a single good feathered pullet from any of them."

Among the *Polish* were a cock and two hens, winners of the first prize, that have been very rarely excelled. These were shown in most creditable condition, and perfectly honestly—not any of the anterior feathers of the crests having been removed, as is but too frequently the case in the class for Black *Polands*; and we trust that the attention of poultry judges generally will be on the alert, where feathers have been thus displaced, and "TRIMMING" will, during the coming season, be equally repudiated by them in this class as in any other variety. In the Extra Class, a pen of *White Polands* took the first prize, and a trio of *Black Hamburgs* the second; a pen of *Black Cochins* were also here shown, and were deservedly "commended." The Golden and Silver-laced *Bantams* were very inferior; and exhibited as the former variety, were a pen the "first-cross" between a Silver Sebright and a Silver *Hamburgh*; they were very beautifully-plumaged birds, remarkably clean, possessing all the characteristics of the "hen-tailed" *Hamburgs* (except a trifling deficiency in size), and, by careful crossing, could, no doubt, be made a permanently beautiful and useful variety. Of course, they were unsuccessful in the class in which they had been here entered, and could not hope to be otherwise, with all the attention that could in future years be paid in breeding them, unless as extra stock; as the "cross" would be fully recognisable for several generations yet to come to any parties of experience in such matters. In *Geese*, the breeding season being arrived, the competition was confined to *Ganders* only; the first prize being taken by a really good *Emden*. The second, by one of the *Toulouse* variety. Of *Ducks*, the *Aylesburys* were very good indeed; the *Rouens* indifferent. In the class for "any other variety of *Ducks*," a very beautiful pair of domesticated *Shell Ducks* were exhibited, in the most unsullied plumage and vigorous health, the brilliant colours

of their tortoise-shell feathers showing in most happy contrast to that of their more homely-plumaged rivals. They were so familiar as to eat readily from the hand of any stranger, and were one of the brightest gems of the exhibition; indeed, they proved the most attractive to the public of any. They obtained a first prize.

Among the *Turkeys* were a pen of very closely-bred "bronze-winged," or American wild *Turkeys*; these, too, were perfectly domestic, and resplendent in plumage. They were "claimed," by one of the first parties who entered the exhibition, at the really low price of four guineas, much to the mortification of their successful owner, who had deemed the price demanded strictly prohibitory.

We must briefly allude to another singularity in the Newcastle Exhibition, namely, a pen containing four *Peacocks* in full feather, to which two prizes were to be allotted; though strangers, "they appeared to be the very best of friends," and to secure *individuality*, each was adorned with a large white ticket suspended round the neck upon the crop, on which, in very legible characters, was placed its number. They were very superior as to condition, played almost continually to each other, and by their natural hoarse guttural cry, excited no small degree of amusement among the assembled bystanders. A pair of that very uncommon variety of *Pigeons* called "Swallows" were shown, exquisitely clean and beautifully-feathered; they are the first pair that have as yet appeared at any of our poultry exhibitions, and, consequently, they had no lack of admirers. A group of Chinese *Golden* and *Silver Pheasants* also proved very attractive, "though not entered for competition."

The Judges for the Poultry were the Rev. Robert Pullein, of Kirby Wiske Rectory, and Mr. Edward Hewitt, of Spark Brook, Birmingham; Mr. Bockerby, of Darlington, adjudicating the prizes for the *Pigeons*: and we were pleased to find the awards of these gentlemen gave general satisfaction.

Class 1.—COCHIN-CHINA (Cinnamon or Buff).—Best Cock and two Hens.—5. First prize, H. Marshall, Durham. 1. Second prize, Rev. G. Hustler, Appleton, Tadcaster.

Class 2.—Best Cock and one Hen.—First prize withheld. Second prize, Mrs. Parker, Coalstaith, Brampton.

Class 3.—COCHIN-CHINA (Partridge or Brown).—Best Cock and one Hen.—27. First prize, Thomas Bridges, Croydon, Surrey. 24. Second prize, John Bell, at Wm. Rhode's, Thirsk.

Class 4.—Best Cock and one Hen.—First prize withheld. 29. Second prize, Mr. Wm. Trotter, Bywell.

Class 5.—COCHIN-CHINA (White).—Best Cock and two Hens.—32. First prize, H. Marshall, Durham. 33. Second prize, Nathaniel Plews, Darlington.

Class 6.—Best Cock and one Hen.—39. First prize, John Taylor, Seaton Sluice.

Class 7.—COCHIN-CHINA.—Hatched in 1854.—Best Cockerel and two Pullets.—40. First prize, Mrs. W. T. Bell, Hill House, Bishopwearmouth. 52. Second prize, H. Marshall, Durham. Commended.—41. Rev. G. Hustler, Appleton, Tadcaster. 59. C. F. Perkins, Picktree, Chester-le-Street.

Premier Prize (a SILVER CUP), for best in classes 1, 3, 5, and 7, H. Marshall, Durham.

Class 8.—BRAHMA POOTRA.—Best Cock and two Hens.—73. First prize, C. F. Perkins, Picktree House, Chester-le-Street.

Class 9.—SPANISH.—Best Cock and two Hens.—89. Wm. Lightfoot, Shieldfield, Newcastle. 85. Second prize, James Beattie, Haddington Prison.

Class 10.—Best Cock and one Hen.—101. First prize, Charles Wilson (cottager), High-street, Gateshead. 97. Second prize, John Shorthose, Shieldfield Green, Newcastle.

Class 11.—Best Cockerel and two Pullets.—125. First prize, Wm. Lightfoot, Shieldfield, Newcastle. 113. Second prize, John Shorthose.

Premier Prize (a SILVER CUP), in classes 9 and 11.—129. Wm. Lightfoot.

Class 12.—DORKINGS (Coloured).—Best Cock and two Hens.—129. First prize, Rev. G. Hustler. 128. Second prize, Daniel Harrison, Singleton Park, Kendal. Commended.—H. Bolckow, Esq., Marton Hall, Middlesborough.

Class 13.—Best Cock and one Hen.—139. First prize, John Shorthose. 140. Second prize, John Graham (cottager), West Jesmond.

Class 14.—Best Cockerel and two Pullets.—147. First prize, Wm. Topping, Warwick Bridge, Carlisle. 146. Second prize, Edward Ackroyd, Denton Park, Otley, Yorkshire.

Class 15.—DORKINGS (White).—Best Cock and two Hens.—155. First prize, L. W. Atkinson, Esq., Newbiggin, Hexham. 156. Second prize, L. W. Atkinson, Esq., Newbiggin, Hexham.

Premier Prize (a SILVER CUP), for best in classes 12, 13, and 15.—129. Rev. J. Hustler, Appleton.

Class 16.—No entry.

Class 17.—GAME FOWL.—Best Cock and two Hens.—167. First prize, John Charlton, Simpson-street, Newcastle. 157. Second prize, J. W. Pearse, Woodlands, Darlington. Commended.—Joseph Conyers, Boar Lane, Leeds.

Class 18.—Best Cock and one Hen.—170. First prize, J. Charlton. 169. Second prize, A. G. Gray, Esq.

Class 19.—GOLDEN-PENCILLED HAMBURGHES.—Best Cock and two Hens.—171. First prize, Daniel Harrison, Singleton Park, Kendal. 172. Second prize, E. Featherstonhaugh, Hermitage, Chester-le-Street.

Class 20.—Best Cock and one Hen.—185. First prize, Edward Pease, jun., Southend, Darlington. 189. Second prize, Joseph Conyers, Boar Lane, Leeds.

Class 21.—SILVER-PENCILLED HAMBURGHES.—Best Cock and two Hens.—195. First prize, Jonathan Bell, High Shield, Hexham. 200. Second prize, John Dixon, North Park, Bradford. Commended.—E. Featherstonhaugh, Esq.

Class 22.—Best Cock and one Hen.—214. First prize, Henry Sturtees, Riding Mill. 209. Second prize, Wm. Forster, Oxon Roads, Hexham.

Class 23.—GOLDEN-SPANGLED HAMBURGHES.—Best Cock and two Hens.—218. First prize, H. Wood, Legram's Lane, Bradford. 223. Second prize, James Dixon, North Park, Bradford.

Class 24.—Best Cock and one Hen.—232. First prize, James Dixon, North Park, Bradford. 223. Second prize, Wm. Forster, Oxon Road, Hexham.

Class 25.—SILVER-SPANGLED HAMBURGHES.—Best Cock and two Hens.—250. First prize, James Dixon, North Park, Horton, Bradford. 239. Second prize, Geo. Dixon (cottager), Riding Mill, Hexham.

Class 26.—Best Cock and one Hen.—245. First prize, Wm. Trotter, Bywell. 243. Second prize, Geo. Dixon.

Class 27.—POLISH (Black with White Crests).—Best Cock and two Hens.—250. First prize, Jos. Conyers, jun., Boar Lane, Leeds. 251. Second prize, Jas. Conyers, jun.

Class 28.—Best Cock and one Hen.—First prize withheld. Second prize, A. G. Gray, Esq., Newcastle.

Class 29.—GOLDEN POLISH.—Best Cock and two Hens.—259. First prize, Wm. Trotter, Bywell. 255. Second prize, James Dixon, North Park, Bradford.

Class 30.—Best Cock and one Hen.—263. First prize, Wm. Trotter, Bywell. 261. Second prize, Jos. Conyers, jun., Boar Lane, Leeds.

Class 31.—SILVER POLISH.—Best Cock and two Hens.—264. First prize, Perkins Jones, High Street, Fulham, London. 265. Second prize, James Dixon.

Class 32.—Best Cock and one Hen.—First prize withheld. 266. Second prize, Perkins Jones.

Class 33.—ANY OTHER DISTINCT BREED NAMED.—Best Cock and two Hens.—272. First prize, Henry Bolckow, Marton Hall, Middlesborough. 274. Second prize, Jos. Cowpers, Leeds. Commended.—H. Bolckow, and Jos. Conyers.

Class 34.—One Cock and two Hens in each class.—Best Gold-laced.—275. First prize, H. B. Priestman, Benwell House, Newcastle. 276. Second prize, H. Marshall, Esq., Durham.

Class 35.—Best Silver-laced.—First prize withheld. 293. Second prize, Mrs. Saltors, 2, Keppel-street, South Shields.

Class 36.—Best White.—286. First prize, John Bruce (cottager), Brafferton, Darlington. 284. Second prize, J. W. Pease, Woodlands, Darlington.

Class 37.—Best Black.—288. First prize, W. Topping, Warwick Bridge, Carlisle. 291. Second prize, Jos. Conyers.

Class 38.—Best of any other variety.—First prize withheld. 292. Second prize, Edward Pease, Esq.

Class 39.—Any of the above breeds.—297. First prize, N. G. Lambert, Esq., Killingworth House, Newcastle. 298. Second prize, William Lightfoot, Shieldfield.

Class 40.—GESE.—307. First prize, H. S. Carr, Shotley Field. 303. Second prize, (Gander) Hon. Mrs. T. Liddell, Ravensworth Castle.

Class 41.—DUCKS (Aylesbury).—Best Drake and two Ducks.—317. First prize, L. W. Atkinson, Newbiggin. 320. Second prize, Joseph Conyers. Highly Commended.—Wm. Trotter, Bywell.

Class 42.—DUCKS (Rouen).—Best Drake and two Ducks.—324. First prize, Richard Collingwood, Southwick, Sunderland. 325. Second prize, Rev. J. F. Bigge, Stamfordham Rectory.

Class 43.—ANY OTHER VARIETY.—Best Drake and two Ducks.—333. First prize, Hon. Mrs. T. Liddell, Ravensworth Castle. 334. Second prize, Jonathan Bell.

Class 44.—MUSCOVY.—Best Drake and one Duck.—339. First prize, G. W. Stable, Heaton Dean, Newcastle. 338. Second prize, Mrs. S. Rutherford, Elswick Lane.

Class 45.—TURKEYS.—Best Cock and Hen.—341. First prize, James Dixon, North Park, Bradford. 343. Second prize, Mrs. Forrester, Follonsby, Felling.

Class 46.—Best Cock.—347. First prize, Mr. Wm. Trotter, Bywell. 344. Second prize, George Grainger, Newcastle.

Class 47.—GUINEA FOWLS.—Best Pair.—350. First prize, Mrs. Forrester. 348. Second prize, Miss Peacock, Dinnington.

Class 48.—EXTRA STOCK.—To deserving specimens the following prizes were awarded:—357. First prize, G. W. Stable, Heaton Dean, Newcastle. 360. Second prize, E. D. Swarbeck, Sowerby, Thirsk.

Class 49.—To the Cottager, rent not more than £8, who exhibits the best lot in any of the above classes.—214. First prize, Henry Surtees, Riding Mill. (Class 22.) 140. Second prize, John Graham, West Jesmond. (Class 13.) 239. Third prize, G. Dixon, Riding. (Class 26.)

Class 50.—PEA FOWL.—Best Peacock.—364. First prize, Wm. Trotter, Bywell, 363. Second prize, Mrs. Tweddle, Penny Hill, Ponteland.

Class 51.—PIGEONS.—Best pair of Carriers.—First prize, Wm. Kennedy, Cramlington, Newcastle. Second prize, J. Percevall, Clent Villa, Birmingham.

Class 52.—Best pair of Almond Tumblers.—First prize, Geo. Fawdon, Gateshead. Second prize, Geo. Fawdon, Gateshead.

Class 53.—Best Balbs or Beards.—First prize, Geo. Fawdon. Second prize, J. Percivall.

Class 54.—Best Nuns.—First prize, Wm. Kennedy. Second prize, J. Percivall.

Class 55.—Best Turbits.—First prize, Wm. Kennedy. Second prize, George Cooper, 52, Clayton-street, Newcastle.

Class 57.—Best pair of Jacobines.—First prize, Wm. Kennedy. Second prize, Geo. Cooper.

Class 58.—Best pair of Fantails.—First prize, George Fawdon. Second prize, J. Percivall.

Class 59.—Best pair of Trumpeters.—First prize, Mr. Irwin, Gateshead. Second prize, Wm. Kennedy.

Class 60.—Best pair of Pouters or Croppers.—First prize, George Fawdon. Second prize, William Dunn, Millfield Byers, Bishopwearmouth.

Class 61.—Best pair of Barbs.—First prize, J. Percivall, Birmingham. Second prize, Wm. Kennedy, Cramlington.

Class 62.—Best pair of Runts.—First prize, Thomas Bridges, Croydon, Surrey.

Class 63.—Best pair of Dragons.—First prize, G. Fawdon. Second prize, Cuth. Burnump, jun., Newcastle.

Class 64.—Best pair of Swallows.—First prize, Wm. Kennedy.

Class 65.—Best pair of Turtle Doves.—First prize, J. S. Challoner, Newcastle.

Class 66.—RABBITS.—Best Long-eared.—First prize, John Wisdom, Marton Hall, Middlesborough, Yorkshire.

Class 68.—EGGS.—Best twelve Hen Eggs.—First prize, Henry Williams, Sunderland Road (Spanish). Second prize, Mrs. W. T. Bell, Hill House, Bishopwearmouth (Spanish.)

Class 69.—Best twelve Duck Eggs.—First prize, Rev. J. F. Bigge, Stamford Rectory. Second prize, Rev. F. R. Simpson, North Sunderland.

Class 70.—BUTTER.—Best pound of Sweet.—First prize, Hon. Mr. T. Liddell, Ravensworth Castle. Second prize, Wm. Trotter, Bywell.

PEARS ON WHITE THORN STOCKS.— PREVENTING THE CARROT GRUB.

By an accident, I have only just received No. 337 of THE COTTAGE GARDENER; otherwise, I would have endeavoured to answer two of the questions therein asked earlier.

I have seen several Pear-trees on Hawthorn stocks in the cottage gardens in this parish; but they are looked upon here merely as curiosities, and though they bear, they do not look healthy, or likely to be profitable.

I never could grow clean Carrots in my garden here, till I took to dig in a good dressing of soot, which plan I have now followed some years with the greatest success. The insects which used to annoy me were different in colour and size from the wireworm, being much smaller, and of a dirty white colour, and though we called them wireworms, I think they were not really so, as we have plenty of the true hard-skinned, straw-coloured wireworms in other parts of the premises.—H. M. SHERWOOD, *White Ladies, Aston Vicarage, Worcester.*

[Our correspondent is quite right as to the Carrot-grub. It is the larva of a fly, *Psila rosæ*; but the wireworm is the larva of a beetle, *Elater*.]

PEARS ON WHITE THORN STOCKS.

In the number of THE COTTAGE GARDENER for March 13, page 463, "H." enquires if the Pear will succeed on the White Thorn stock. The writer of this answer is acquainted with two Pear-trees which were so grafted about twenty-five years ago. As in the case of "H.," they were grafted by my uncle in my father's garden. They are both standards, and

such small trees, that a good-sized table-cloth would cover each of them. They are perfectly healthy, and free from canker, though they are in a garden where few Apple-trees will live. They bear well every other year; and I have no doubt they would bear every year if properly pruned. Like "H.," with my uncle I imbibed a taste for flowers and gardening; but I lost his tuition when very young, though I still retain a grateful recollection of it.—J. ROGERS, *Haverford West.*

A FRIEND and neighbour of mine, who is but an amateur gardener, but who is very fond of trying experiments, has long been in the habit of grafting Pears upon White Thorn stocks, and he says, he thinks the Thorn feeds the graft as amply as the Quince, and has not found it to fail in any of the sorts that he has cultivated. There is a *St. Germain*, in a neighbour's orchard, grafted by him on a White Thorn, which has grown well, and bears in great profusion; and I have a *Marie Louise* in mine, which is also very healthy; but we are too far north to allow of this delicate Pear coming to much perfection. He thinks that your enquirer need not despair of success upon a White Thorn stock, in any soil where the situation and climate are suitable. As, however, the Thorn does not swell so rapidly, or, perhaps, ever reach the bulk of the Pear, he advises, that if the tree be intended to be a standard, the ground upon which it grows should be level, and the graft inserted very near the surface, so that the joining may not appear above ground; besides which, he thinks the Thorn has a better chance of swelling below than it has above the surface. As the Thorn, like the Quince, is not so replete with juice as the free stock, he thinks that it is better adapted for the *Beurée* than for the *Musk*, or dry Pears. He also thinks that the Thorn stock has this advantage—it is not so fastidious in regard to the soil as either the free stock or the Quince.—J. C.—N.

EARTHEN PIPES FOR FLUES.

To attract notice, I at once commence with a *recommendation*. I would advise all who may wish to try the pipes to do what I would do myself, if I were again to put them in; I WOULD BUILD WITH FIRE-BRICKS IN THE ORDINARY WAY FOR FOUR OR FIVE FEET FROM THE FIRE-BRANDER, AND THEN attach the pipes. This would obviate all risk—at three or four feet from the fire, I could always have held my hand on the pipes. They heat very regularly *all round*, and the upright pipes get warm along with the others. To strengthen mine, I am to take out the sand, and surround with mortar and small stones for six or eight inches, which I think will keep them as firm as a rock. Both these modes will retain the heat much longer. I cannot discern any soot in the pipes, and I can corroborate the statement as to the excellent draft. Indeed, from whatever direction the wind blew, I never had a puff of smoke at the stoke-hole, and the fire was easily lighted. But in course of time, when they would be the better for cleaning out, I think by firing a few shots of a pistol along the pipes, then taking steps and pouring a few pailfull of water down the chimney, will clean them out. Or, from the form of the pipe, a small ball of thread or twine can be washed down, so as to communicate an efficient mode of cleaning.

I trust some practical person may, as recommended by you, try the efficiency of these pipes, and report. Any recommendation that I may have held out has only been from the experience of my own, although I have no other interest than for the good of my fellow amateurs.—A. G., *Edinburgh.*

Now "look on this picture."

In perusing over THE COTTAGE GARDENER of the 4th inst., I find that glazed earthenware pipes are recommended for heating small greenhouses. I have not had any experience in their use with hot-water, but to those who are thinking of using them instead of a brick flue, I beg to offer my advice; and, first, I say, do not use them at all; and, secondly, to those who are determined to try them, do not use them less than eight inches diameter, and carry a brick-flue at least two or two-and-a-half-yards from the fire, before commencing with the pipes. I have scarcely time to

write, but I certainly should be glad to save others from the expense and annoyance that I experienced four years ago. I erected a small greenhouse, twelve feet by nine feet. Glazed pipes were recommended to me, which I thought, at the time, would look neat, and be economical. I gave them a trial, but never felt satisfied with them, and never went to bed comfortable when I had a little extra heat to put on. It was not long before my doubts were fully realised. I examined the pipes one evening, which was my regular practice, when I found that one piece of pipe had cracked, and flown in all directions (the pipes are in eighteen-inch lengths), one piece had splintered off as large as my hand, fortunately I caught it in time before the smoke had escaped. I immediately put out the fire, and next day had a brick-flue substituted, two bricks on edge for each side, and five inches wide, covered with bricks crosswise, which has answered much better than the pipes could have done, even if there was no danger of them cracking. My flue runs front, end, and back of the house, and throughout the late severe frost the thermometer has ranged from 38° to 44°, although the fire was generally made up at ten or half-past for the night. One ton of slack, value 7s., and two or three barrow-loads of cinders, have furnished me with sufficient fuel throughout the past winter. It was said that the pipes are very soon heated, *which is very true*; but they are also very soon cold. And I am quite certain that a brick-flue, such as I have described, will, in a very frosty night, have from four to six degrees in its favour, with the same amount of fuel.—JNO. NOBLE, *Boston Spa.*

QUERIES AND ANSWERS.

GARDENING.

APPLYING GUANO TO POTATOES.—FORCED STRAWBERRIES NOT BLOOMING.

"Mr. Errington said in *THE COTTAGE GARDENER*, some time ago, that he used Guano for the growth of his Potatoes. Will you say the best way of applying it; and how much for half-an-acre? I thought of sowing it on them before earthing them up.

"Can you tell me the reason of *Strawberry plants* not flowering? I had what looked to be a very good lot of strong plants potted early last summer, and kept in a cold frame until January, and not one in ten are blooming. Instead of one good crown they have three or four slender ones. They are *Keene's Seedlings*.—W."

[Mr. Errington begs to apologise to this enquirer for mislaying his inquiry. The mode of using Guano in Cheshire is to apply it first as the Potatoes are about springing from the ground, covering the Guano immediately with soil. About 3 lbs. to 4 lbs. to the rood, which is about eight yards square, is the practice there.

It is impossible to say what ails your Strawberries without seeing them.]

JOYCE'S STOVE FOR A GREENHOUSE.—REMOVING THE WOOD FROM THE ROSE-BUD IN BUDDING.

"I have a small greenhouse, say twelve feet by nine feet, and not wishing to go to the expense of a hot-water apparatus, I procured one of Joyce's Patent Stoves, which I saw amongst your advertisements. Thus, for the outlay of about twenty-one shillings, I was enabled to sustain a uniform temperature of 45°; and taking into consideration the severity of the past winter, I think it in fairness to the patentee that I should make the statement—that in its adoption it is perfectly safe, and in no way have I found any injury resulting, as was told me would be the case to the plants, and which I noticed in a number of your journal had so ill succeeded, that your correspondent lost all his plants. My plants are a general assortment, such as Geraniums, Fuchsias, Heaths, Verbenas, &c., all of which have sustained a vigorous growth, and I have been free from

the attack of Green Fly, which was so troublesome the previous winter. There is certainly one drawback to such a mode of heating, and that is the expense of fuel, which averaged with me, when in full operation, about sixpence per twenty-four hours.

"Should I be asking too much if,—in the operation of *Rose-budding*, when having selected and slipped off a Rose-bud for insertion,—it is indispensable to remove the small portion of woody fibre from the bark, or rather strip it off? As in many instances, last year, in separating the wood from the bark, I fancy I must have also drawn out the eye of the bud, as I was perfectly satisfied no failure would arise from either my mode of insertion or binding up, and yet I had many failures where I did not expect them.—H. W. MIALI, *Spring Hill Lodge, Southampton.*"

[We are much indebted for receiving such a favourable account of Joyce's Stove. It does not quite tally with our own experience the first year it was introduced; but, doubtless, it has been improved since then. We have, personally, an objection to stoves of any kind in a house; but we do not wish others to be of the same opinion as ourselves; and it is perfectly right that every patentee and manufacturer should at the very least have justice. The severity of the winter, and your experience, especially when duly subscribed, speak much in favour of the stove used.

Most budders like to get rid of the wood, with the exception of the little knob that forms the base of the bud; and in getting out the wood, if at all hard, very likely the base of the bud goes with it, and there is little chance of the bud taking. Many believe that if the wood is left canker or gum is apt to follow. Our practice would be this: where buds are plentiful, we would prefer using those where the wood parted freely; but in a good kind, and where we had few buds, we would sooner insert the wood that remained than run the risk of losing the bud by extracting the base of the bud along with the wood. We have seldom found any disadvantage remaining from a small portion of the wood being left. If the weather has been damp, and the shoots are in good order, and are kept fresh, the wood will generally come out clear from the middle of July to the middle of August, leaving a mere round knob at the base of the bud, and these are, certainly, to be preferred when the wood is left, as it more resembles a graft.]

VENTILATING A STOVE.

"I have a small lean-to stove, principally for Orchids, twelve feet long, nine feet wide, and ten feet in height, with a recess behind of six feet wide, ten feet high, which is not separate from the rest, but has no glass covering, there being a room over; there is glass in front, and from under the wall-plate spring cold frames. I use hot-water, and a flue running in front and one side, with a chimney in the corner of the recess. There are two sliding ventilators in front, opening opposite the pipes and flue, and which are always open, and through which I sometimes think heat escapes into the cold frames in front.

"Now I think there is sometimes a stagnation of air, and I want your advice about putting an Arnott's Ventilator, or any other contrivance, in the chimney near the ceiling; there is a damper in the chimney.—A SUBSCRIBER, *Dublin.*"

[If there are merely openings into the cold pit in front, and that is kept shut, it is likely there will be stagnation in the atmosphere; a few ventilators near the ceiling would remedy the evil. The ventilators in the chimney would also be useful in severe weather, provided you can escape from back drafts of smoke. There is no danger of stagnation when the sun shines. In dull, cold weather, when you might be averse to burn freely, to enable you to give air, a free circulation would be promoted among your plants were you to make a division between the glass department and the space behind, and leave four six-inch openings at the top and at the bottom. The heated air would find an exit at the top and the place behind; and then the heat from the flues, &c., would draw fresh cooler air from the bottom. We are not, however, quite sure that we understand you.]

FLUE FOR A GREENHOUSE.—WIDTH OF LAP FOR THE GLASS.—GREENHOUSE CLIMBERS.

"I am building a small Greenhouse, sixteen feet by ten feet, chiefly for the sake of wintering plants, though I hope to make it useful in other ways.

"I purpose to warm it with a flue carried through the east and south walls only; will this be sufficient?

"Is there any objection to sinking the floor one or two feet below the outer surface? I cannot raise the back wall, yet should be glad of a greater height inside.

"The roof is at an angle of 68° with the back wall. Do you recommend the laps in the glass to be wide or narrow? I fear, in so flat a roof, the rain will drive in very much. How can I remedy it?

"Can you recommend me a good list of plants for such a house, chiefly climbers, as I shall not have Vines? I particularly want winter flowering plants.—H. W. E."

[The flue will be quite sufficient for what your propose. You had better have laps a quarter-of-an-inch wide, and if puttied all the better. A small opening may be left in the centre between each of two squares, to let the condensed moisture trickle out. There will be little moisture that can get in, even without puttying.

The more you sink the floor of your house inside, provided you secure against undue amount of damp, the easier will you be able to keep cold and frost out.

Few climbers bloom well in winter. Have one or two of the *Habrothamnus elegans*; and you will perceive a list given in reply to a correspondent two or three weeks ago.]

MOVING ROOTED ROSE CUTTINGS.

"In the autumn of last year, I followed Mr. Beaton's instructions for propagating Rose-trees from cuttings, and the result is most satisfactory. Of at least a hundred varieties, and several cuttings of each kind, including Chinas, Hybrid Chinas, Bourbons, Hybrid Bourbons, Hybrid Perpetuals, Hybrid Provence, and Noisettes, I have not lost four kinds entirely, and certainly not two per cent. of the whole.

"After thanking you for the great pleasure afforded me, as an amateur gardener, by this simple process, I venture to trouble you for advice as to the future management of the cuttings; they are growing vigorously, and being planted closely together, there is a prospect of the roots being so intertwined as to make it difficult to separate them, and I wish to know the proper season for replanting them.—A GRATEFUL SUBSCRIBER."

[After reading the above, we took a turn round to see our own last autumn Rose cuttings, and, to our great comfort, we found that we are just on equal terms with our successful correspondent—perhaps less than two per cent. would cover our *apparent* loss—but the trite adage comes in here between us, exclaiming "Dinna holloa till ye are out o'the wood." If we see Midsummer's-day with a loss of not more than ten or twelve per cent., we shall be satisfied, and hope for better luck again. The snow covering so long, at the critical turn of the season when Rose cuttings go off, tops and bottoms alike, has saved the tops, to keep up "appearances;" perhaps, to crown success, and let us all hope so, but not build on such hopes just yet awhile. Our correspondent does not say what were the exact distances between his cuttings, but guessing they were planted as thick as Rose cuttings usually are under such circumstances, we find that our own Rose cuttings are just twice as thickly "put in,"—for we never plant cuttings at all—and ours will go just as they are till the very end of September; if, in the mean time, any one of the cuttings, or of the tribes of Rose, come up too fast, or too strong for those which are right or left of them, we shall stop them in time, to keep them from doing mischief; we shall water them, after the middle of May, twice a week in dry weather. About the 20th of September, if it does not fall on a Sunday, we shall cut them all down to within four inches of the ground, and put in the tops for cuttings; and early in October we shall lift the whole as carefully as we can, and with very little cuttings of the roots, we shall transplant them into our own nursery.]

POULTRY.

COST OF FEEDING PIGEONS.

In answer to P. B. BURT, we can only say, Pigeons being usually fed in common with other poultry, we are without data on which we could positively state the exact consumption of food in a year by a single pair of those birds. The conditions under which they were kept, whether in a loft, without any chance of foraging for themselves, or at large in a country dove-cot, so materially influence the question, that a general reply would be most unsatisfactory. Any anticipation of profit, however, from the sale of the young birds as dead meat at market, would, we believe, be futile; for, though in some instances large receipts may be obtained with a comparative small direct outlay, then indirect plunder of the neighbouring corn-crops is not there taken into computation.

FERMENTING RHUBARB WINE.

Replying to *A Constant Subscriber*, at page 18 of the present volume,—we do not add yeast. Spontaneous fermentation commences in the cask, and care must be taken that the cask be not tightly bunged down until this fermentation has ceased. We do not use brandy, preferring the flavour of the wine without.—H. W.

EGGS AND POULTRY.

FEW persons, we apprehend, have any correct idea of the magnitude of trade, both at home and abroad, in poultry and eggs. Having recently had our attention directed to a work embodying some interesting statistics on the subject, we propose placing them before the reader. The amount of sales of poultry at the Quincy market, Boston, in the year 1848, was six hundred and seventy-four thousand four hundred and twenty-three dollars, while for the city of Boston, they exceeded four millions. The number of eggs sold in Quincy market was 1,129,735, the price paid for them being about 203,352 dollars, or an average of 13 cents per dozen. The sales in the whole city, it is supposed, fell little short of 1,000,000 dollars. The daily average consumption of eggs at three hotels, in that year, was 200. The city of New York, however, it is estimated, expends a million-and-a-half of dollars yearly in the purchase of eggs. Probably the amount in 1853 was much larger, as the above estimate was made in 1848. One single dealer in Philadelphia sends to this city daily one hundred barrels of this commodity. Ireland and France are great egg-exporting countries. We have not the most recent statistics, but they are of sufficiently late date to approximate to the present condition of the trade. McCulloch says that the amount paid yearly by England to Ireland for eggs and poultry, is from £200,000 to £300,000. The yearly value of eggs alone exported from Ireland to Great Britain exceeds £100,000. The number is probably 70,000,000 or 80,000,000. The British census for 1841 gave an *ad valorem* estimate of the poultry stock in Ireland, in which each fowl was estimated at only sixpence sterling. According to this estimate, it showed that in the province of Leinster the poultry stock amounted to £56,243; in Connaught, to £35,216; in Munster, to £62,830, and in Ulster, to £47,883: making a total of £202,172. But even at the low average named, the amount probably much exceeds this, as the people supposed the inquiry was made to obtain the basis of some new tax, and reported the number as being less than it really was. The number of boxes of eggs shipped by the City of Dublin Steam Packet Company's vessel to London, during the year 1844-5, was 8874. A box of the usual dimensions contains 13,000 eggs, but occasionally larger ones are used capable of containing about four times that number; so that about 24,565,500 are annually shipped from Dublin to London. To Liverpool, in the same year, in the same company's vessels, were shipped 5135 boxes, containing 25,565 eggs; giving a total export from Dublin to two ports of England of 48,539,900, valued at £122,500. Since then, however, the trade has enormously increased. In 1840, Great Britain imported from France and Belgium

96,000,000 of eggs, the duty upon which (one penny per dozen) amounted to £34,000. Nine-tenths of the foreign eggs imported into Great Britain are from France. The importation thence in 1842 was 89,548,741; in 1843, 70,415,831; and in 1844, 67,487,920. The yearly importation exceeds 80,000,000. The consumption of eggs in Paris is estimated at upwards of one hundred millions yearly. Supposing a fowl to produce one hundred and twenty eggs annually—which is perhaps a fair average—the reader may imagine the immense stock of poultry that must be kept in France. Any one who has travelled in that country is aware that they are reared in vast numbers, they being the most profitable stock on the many farms owned or tenanted by the French peasantry. The late poultry shows have tended to awaken new interest in the breeding and rearing of poultry by our own farmers, especially those whose land is situated near large cities, or where there are means of rapid transport to such cities. Though we are far from believing all the stories which interested parties, or amateur poultry-keepers put forth, there can be no question that, with economical management, the poultry-yard becomes a source of large profit, as it is of unabated interest. On this subject, however, others are far more competent to speak than we are. But we are glad when a new impulse is given to the rearing of any domestic stock, and though the present movement in that direction looks a little too much to extravagance in size, or peculiarity of breed, its mature result will be beneficial to the farmer, and through him to the consumer.—*N. Y. Commercial Advertiser.*

TO CORRESPONDENTS.

ANSWERS to several Correspondents must remain until next week.

PERIWINKLE UNDER TREES (T.E.).—There is no need to rake the leaves off, they can be brushed off with a broom. The few which remain decay and manure the Periwinkle. The sulphur and lime will not hurt the Plum-tree buds. It probably sheds its fruit because the walk and the shallow soil prevent its obtaining food enough. Try manuring it, and keep the roots mulched all the summer.

GARDENING WORK (An Intended Gardener).—THE COTTAGE GARDENERS' Dictionary will suit you. Soaking seed is not generally useful. Usually it is best to let seeds absorb moisture gradually from the soil in which they are sown.

CUCUMBER BED (A Constant Reader).—We should prefer building it on pillars, so that the dung may be renewed at any time when the heat declines.

HYDRO-INCUBATOR (J. Price).—Before we bought one we should visit some private individual who has one, and ask him if knowing what he does now he would buy one if not already possessed of one. The chickens hatched artificially, we believe, are as strong as those hatched under a hen. Any one who has used a Hydro-incubator will oblige us by stating the results of his experience.

WHITE POLAND WITH BLACK TOP-KNOT (A Subscriber).—If the top-knot is quite black we think you could not match it in Europe. We recommend you to buy one of the opposite sex which is white with a greyish top-knot, and breed from them. Mr. Vivian, we think, has the grey top-knotted.

BOOK ON BEE-KEEPING (B.W.).—Buy one of "Richardson's Hand-books," entitled *The Hive and Honey Bee*. Its price is only one shilling. It is published by Messrs. W. S. Orr and Co., London.

CHURN.—H. T. wishes to know the best for churning from ten to sixteen pounds of butter.

FARMING A CLAY SOIL (Silvester).—"A clay soil on an elevated, and, therefore, cold part of one of our western counties" affords slight encouragement to the schemes of the poultry-keeper. For such a locality, the hardy Game fowl would probably be found most suitable; but as regards cost and produce, we cannot hold out any great hopes of success under the circumstances you refer to. At all events, poultry profits would entirely depend on the general economy of your farm management, which, as regards a London supply, would be affected by distance from the railway, and the charge of transmission thereon.

CALENDAR FOR MAY.

ORCHID HOUSE.

AIR: now that the days have lengthened, and the sun obtains much power, air must be given liberally. If the house is built as we recommended, facing east and west, the sun will have great power early in the morning, and late in the afternoon, and, therefore, air must be given accordingly. **BASKETS,** examine weekly, and such as are dry give a good steeping in tepid water. **CATASETUMS, CYRTOPODIUMS,** and plants of similar habit, will now be growing freely, and should be as freely watered at the root, care being taken that no water lodges in the hollow of the

young leaves. **DENDROBIUMS,** and any other plants in flower, should either be removed to a cooler house, till the bloom is over, or be placed at the coolest end of the house, and more air given there; but they should be removed into their growing quarters till they have formed the new bulbs. **NEW PLANTS,** such as have just been received from abroad, should not have much water or great heat till fresh growths are commenced. **HEAT:** during this month the greater part of the plants will be making rapid growth; the heat must be kept up to the maximum. **MOISTURE** must also be plentifully bestowed upon the internal air; wet the walks, walls, and pipes, two or three times a day, especially in the morning and afternoon. **INSECTS,** such as snails and slugs, will abound; destroy them diligently. It is a good practice to look in upon them in the evening, with a lamp or candle; they may be probably found at their work of destruction. **POTTING,** if not finished last month, should now be completed. As soon as a flower is potted, secure each pseudobulb to a stick, the compost being so open they would fall over if not securely tied; this gives an opportunity to arrange the shoots in a symmetrical form. **LYCOPODIUMS** grown in the Orchid House, divide, repot, and tie. **SHADING,** apply daily when the sun shines. **SYRINGE:** this will be in constant requisition, especially for plants growing on blocks. **WATER,** at the root, bestow liberally to all growing plants, but withhold it gradually as the bulbs arrive at maturity. Let the **WEEDS** be all drawn up, for they will grow even in an Orchid House. **T. APPLEBY.**

STOVE PLANTS.

ACHIMENES, attend, with support for the weak-growing; give freely plenty of water to those advanced in growth; pot the last batch this month. **A. picta** is a fine species to bloom in winter. **AIR,** give liberally to keep down at maximum point the internal atmosphere. **AMARYLLIS** coming into bloom, water freely; those going out of flower place in a close pit, and allow the heat of the sun to fully play upon them, to ripen the bulbs. **BASKETS,** if any are used for drooping plants, should be taken down frequently, and dipped in tepid water. **CLIMBERS,** attend to, tie on, keep within bounds, and syringe freely to keep down the red spider. **CUTTINGS** of stove plants: the plants will now be making young growths, and these make the best cuttings; take them off, and pot them in sand in heat. **GARDENIAS,** remove out of hotbeds into the greenhouse to prolong the flowering; give less water; such as have done blooming place in a cold pit. **GLOXINIAS** and **GESNERAS,** repot, and syringe every day. **IXORAS,** specimens, tie out; young plants, place in dung-heat to encourage rapid growth. **HEAT,** keep up to the maximum, 70° by day, 60° by night. **MOISTURE** to the air, supply liberally, by flooding the walks twice a-day. **OLEANDERS,** place in pans of water, to cause the blooms to open freely, and encourage growth. **SYRINGE:** use this instrument freely every fine day, avoiding such plants as may be in flower. **POTTING:** continue to repot young stove plants, to bring them on in growth. **WEEDS;** let none appear beyond the seed; keep everything tidy, neat, and sweet, in order to render the stove attractive and agreeable. **WINTER-BLOOMING PLANTS,** such as *Justicia*, *Eranthemums*, &c., cut down, repot, and place in heat, to start them into growth. **T. APPLEBY.**

FLORISTS' FLOWERS.

AURICULAS and **POLYANTHUSES,** shade, and keep well supplied with water; pot seedlings, and sow, if not done last month. **CARNATIONS** and **PICOTEEs,** finish potting without fail; plant out seedlings to bloom; sow seed. **CHRYSANTHEMUMS,** rooted cuttings, pot off; old plants, divide and repot, use rich compost. **CINERARIAS,** shade; pot off seedlings as they grow; it is not too late to sow seed yet. **DAHLIAS,** harden off, and plant out towards the end of the month; cuttings of rare kinds may yet be put in. **FUCHSIAS,** young plants repot twice during the month; old plants, stop shoots, and repot for the last time; seedlings transplant, water with liquid-manure as soon as the foliage is abundant. **HOLLYHOCKS,** stake, and water with liquid-manure. **PANSIES,** in bloom, shade from sun; water and stir the soil about them; keep them clear of weeds. **PELARGONIUMS,** such as show flower, repot; tie out specimens; give plenty of air to, and water occasionally with liquid-manure; put in cuttings; sow seed. **PINKS,** stir the soil between the rows, and apply a mulching of short dung. **RANUNCULUSES,** water freely in dry weather. **TALL LOBELIAS,** plant out where they are to bloom. **TULIPS,** protect from frosty nights and heavy rains; retard the bloom, if too early, by shading during hot sun. **VERBENAS,** stop cuttings, by nipping off the tops, to make them bushy; sow seed; plant out in large pots for specimens; water freely and shade. Look out for weeds, slugs, and various insects, and destroy them constantly and diligently. **T. APPLEBY.**

FLOWER-GARDEN.

ANEMONES, water well between the rows. **ANNUALS** (Tender), remove into another hotbed; pot, if not done in April; water gently, and give air as much as possible; prick out April-sown. **ANTIRRHINUMS,** plant and sow for late autumn bloom. **AURICULAS** done blooming, remove to N.E. aspect, where they will not have sunshine after nine; offsets with roots detach, and plant three in a pot; seedlings keep in the shade; water moderately in dry weather; Auriculas to seed should be kept from wet. **AWNINGS,** or other shelter, continue over beds of Tulips, &c., now in bloom. **BEDDING-PLANTS,** be not in too great hurry to plant out; the middle of the month is time to begin any of the half-hardy plants. **BIENNIALS,** sow, b., in rows, thinly. **BULBOUS ROOTS,** generally, directly leaves decay, take up and store; seedlings shade through mid-day; plant again after separating offsets, or else store until the end of July. Sow **CHINA ASTERS** to succeed early, or supersede late annuals. **CARNATIONS;** remove side-buds from flower-stems; shade from meridian sun; water in dry weather; put sticks to, and tie stalks; sow, **DAHLIAS,** old, part and plant, b.; young, plant out, e. **DRESS** the borders, &c., frequently. **FLOWERING PLANTS** require staking, &c., **FUCHSIAS** may be planted. **GRASS,** mow and roll weekly. **GRAVEL,** roll weekly. **HYACINTHUS,** take up and store as leaves decay. **MIGNONETTE,** sow for succession, b. **MIXED BORDERS,** go over twice this month, and mark such plants as seem out of place. **OENOTHERA MACROCARPA,** make cuttings of when the young shoots are three inches long. **PRUNE** and transplant **LAURESTINUS** when done flowering; also prune **BERBERIS**

AQUIFOLIA. PERENNIALS, sow, b.; propagate by slips and cuttings. **POLYANTHUSES**, part, and shade throughout the summer; sunshine destroys them; sow seeds of. **ROSES**, watch for insects on, and destroy them; **Roses** in groups, keep them low; **Roses** in pots may be planted out. **Rose-stocks** for budding, do not rub off shoots; but stop those not wanted at the second or third joint. **STAKE** and tie up plants. **SEEDLINGS**, thin. **SURFACE-STIERING** cannot be too frequently performed. **TULIPS**, remove seed-pods; take up and store as leaves decay; water frequently in dry weather. **WALL-FLOWERS**, sow first crop, to bloom next year. **WATER-GLASS** bulbs, plant in borders as flowers decay. **WATER OVER-HEAD**, newly planted shrubs and trees, and see to the mulching. **WATERING**, attend to in dry weather, especially to plants newly removed. At the commencement of this month, during showery weather, plant cuttings of *Double Wall-flowers*, and *Pansies*, and divide the roots of *Neapolitan* and *Russian Violets*, transplanting in preparation for potting to flower in winter. *Half-hardy plants* may now be brought from the greenhouse, and their other winter shelters, and distributed in the border. Mild moist weather is most suitable for this work. The more tender climbing annuals, such as *Tropæolum aduncum* and *Convolvulus major*, should not be planted out until the end of this month. Put in **SLIPS** of *Double White* and *Purple Rocket*, under hand-glasses, or near a wall on the north side. **CUTTINGS** of *China Roses* plant in a shady place.

D. BEATON.

GREENHOUSE.

AIR admit freely in good weather. If the house should be shut up in cold nights, give air the first thing in the morning; toward the end of the month leave a little air all night, increasing the quantity by degrees. **ANNUALS**, &c., bring in from pits and frames, when approaching the blooming state. Sow quick-growing ones, as *Balsams*; and hardy ones, as *Collinsias* and *Nemophilus* for succession. **MIGNONETTE**, sow in pots, or in turf under protection, for succession. **ACHIMENES**, bring first or second lot from their winter quarters, and place them in pans in the front of a cucumber-pit, or under a handlight in the greenhouse. **BALSAMS** and **COCKSCOMBS** must now be sown or potted; the *Balsams* requiring less heat and more air than the *Cockscombs*. **CUTTINGS**, consisting of nice stubby side-shoots of young growth will now root readily in a mild bottom-heat. All bedding-out plants intended for the balcony or a small flower-garden may now be propagated very easily, if inserted in a bed of light soil over a little sweet dung, and a frame placed over them. All quick-growing things, such as *Verbenas*, *Ageratums*, and *Calceolarias*, may thus be rooted with little trouble, and be fit for planting or potting in two or three weeks. Young shoots of *Heaths*, *Epacris*, *Azaleas*, &c., may now be struck, inserting them in silver-sand, in pots well drained, and putting a bell-glass over them; keeping them rather cool for a few weeks, and then giving them a little mild bottom-heat. The whole of this section must be treated as previously recommended, according as they are in bloom, have finished blooming or have been cut down by pruning. **EARTH**: stir the surface on pots and borders, and fresh dress where repotting or renewing the earth is not advisable. Sow seeds of the *Orange* or *Lemon*, and when of a suitable size let them be grafted or inarched—preferring the former—and placing the plants in a moist hotbed; any stocks raised late last season may be used. For flowering in a dwarf state, and almost continuously, the *Otaheite Orange* is valuable. **SHIFTING** into larger pots must be carefully proceeded with. In the case of *Fuchsias*, *Geraniums*, *Cinerarias*, &c., intended as successive crops, these advancing should be carefully trained, according to the principles recently adverted to. **SUCCESSION** crops of *Achimenes*, *Gloxinias*, *Gesneras*, &c., must now be seen after. *SALVIA* must be propagating for autumn and winter blooming. Seed of *Salvia patens* produce strong nice flowering plants. Their doing well for the season will depend on the treatment they receive now. *In consulting present convenience we must not forget the future. **STOCKS**, and all half-hardy plants, may now be sown under handlights, or a covering of some sort on a border, and will take the place, in succession, of those that received some artificial heat. **HARDY PLANTS** should now be set in a sheltered corner, to make way for the importations from the pits and frames. The first to be removed may consist of *Coronilla*, *Cytisus*, *Acacia*, *Pittosporum*, &c. **SEEDLINGS** and cuttings must be pricked off in time, or they will destroy each other. **WATER** will be required oftener as the sun gains strength. Plants with large leaves generally require the greatest supply. **PLANTS IN WINDOWS** will now require extra attention. The increase of mild temperature will bring an increase of dust of insects. **VASES** and **BASKETS** for balconies and small gardens must now be got ready, but do not be too venturesome in planting them for a fortnight to come, unless you can cover at night.

R. FISH.

FRUIT-FORCING.

AIR, attend to regularly, still avoiding draughts. **ATMOSPHERIC MOISTURE**, sustain in due proportion. **APHIDES**, destroy. **BOTTOM-HEATS**, attend to carefully: beware of burning; 80° to 86° is enough for any purpose. **CHERRIES**, will be ripe or ripening, ventilate freely. **CUCUMBERS**, thin, stop, and train; renew linings; get forward for ridging. **FIGS**, use cautiously. **FIGS**, water freely and stop. **HEATS** in general, advance with the season; be moderate in night heats. **LIQUID-MANURE**, use occasionally. **LIGHTS**, keep clean. **MELONS**, dress frequently; thin in the bine; stop a couple of joints beyond the fruit; sustain bottom warmth, and above all, permit no insects. **NECTARINES**: See *Peaches*. **NIGHT HEATS**, be moderate in. **PEACHES**, attend to thinning both wood and fruit; stop wild shoots, and see that the root is moist, applying liquid-manure tepid. **PINES**, let top-heat rise with the season; keep abundance of air-moisture, and ventilate liberally; bottom-heat 80° to 86°; successions get on by syringing and closing early; airing well in the morning. **STRAWBERRIES** will be getting towards the end; water freely, liberally, and harden off early forcings to turn out for late out-door crops. **VINES**, stop, train, thin berry, tie shoulders, &c., according to their stages; ripening grapes, remove some laterals, and ventilate very liberally. **VENTILATION** in general must be constantly attended to. **WATERING** frequently; examine carefully the roots of fruits, if well drained they will take liberal waterings.

R. EBBINGTON.

HARDY FRUITS.

APPLES, choice, protect in blossoming; apply a briny clay paint for the American blight. **APRICOTS**, pick for the grub; pinch back all foreright shoots to two eyes, and disbud where absolutely necessary, remembering that where naked boughs occur, they may be clothed with spurs by tying down young shoots on those reserved at this period. **BLOSSOMS** in general cleanse or otherwise assist. **BANDAGES** of all kinds remove or loosen as early as safe. **BLACK CURRANTS**, dress for fly; soap-suds and tobacco-water, and water much at the root in the end. **CHERRIES**, beware of insects; dress as *Currants*. **DIGGING** of borders, beds, &c., finish. **GRAFTS**, replace and secure clay if loose. **GOOSE-BERRIES**, hand-pick if grubbed; top-dress where necessary. **MUL-BERRIES**, in training, disbud and pinch back similar to *Apricots*. **NUTS**, keep down rising suckers, and pinch gross shoots. **NECTARINES**; see *Peaches*. **PEARS**, disbud gross superfluous shoots, and pinch back weak ones where too thick; hunt for the Pear grub or caterpillar, which clusters in curled leaves. **PEACHES**, disbud; pinch back; remove foreright and back shoots, and thin fruit slightly at the end; apply mulchings if on platforms, toward the middle; beware of insects, they prove ruinous in a very few days. **PLUMS**, as *Apricots*, dress for insects, as *Black Currants*. **STRAWBERRIES**, keep down early weeds and runners, and water very liberally in dry weather. **VINES**, disbud, train, &c. **VERMIN**, continue to destroy with intermission. **WATERING**, attend well to in new planting, and all needful cases.

R. EBBINGTON.

KITCHEN GARDEN.

ANGELICA, plant, or thin out, as the case may require. **ARTICHOKES**, dress off, if not done, and plant a few suckers for succession. **ALEX-ANDERS**, attend to thinning, &c. **ASPARAGUS**, sprinkle with salt once a week during the cutting season. If this be attended to there will be no fear of weeds or slugs; but the surface of the beds should be opened once a week with some little pointed implement. **BALM**, earth-stir among. **BEETS** (Red), thin out, &c. **BASIL** should be exposed to the open air all fine weather, so as to have good stocky plants to plant out toward the end of the month in warm borders. **BEANS**, sow in succession in cool situations; attend to topping and earth-stirring advancing crops. **BORAGE**, sow, and save seed from such as have stood the winter. **BORER-COLE**, sow, b.; prick out, and save for seed. **BROCOLIS** of any kind may be sown at the beginning; for *Cape Brocoli* in particular, this is just the season, when sown sooner they are apt to run and button; attend to pricking and planting out any early-sown kinds, and to look to favourite kinds for seed. **BURNET**, attend to. **CABBAGES**, sow or plant; earthing attend to. **CAPRICUM** raised in hotbeds should be well inured to the open air, for planting out in the open warm border, at the end of the month. **CARROTS**, sow; attend to thinning out advancing crops, also attend to watering the early crops in frames or the like. **CARDOONS**, thin out or sow, b. **CAULIFLOWERS**, the early hand-glass crops should be well basened up, supplied with water, and liquid-manure water, once a week; attend to pricking or planting out in succession. **CELESTY**, may sow; attend to pricking and planting out the earlier sown. **CHAMOMILE**, earth-stir among. **CHERVIL**, sow and leave for seed. **CRESS** (American), sow; save for seed. **CHIVES**, keep clear from weeds. **CORIANDER**, sow and leave for seed. **CROPS FAILED**, lose no time to replace. **CUCUMBERS**, plant out under hand-glasses upon a little bottom-heat; attend to thinning, topping, and removing any decayed leaves daily; those in bearing assist with a little top-dressing often. **DILL**, attend to. **EARTH-STIERING**, in all cases, attend to in dry weather. **ENDIVE**, sow a little towards the end of the month for early use. **FENNEL**, attend to planting out seedlings. **HOTBEDS**, attend to. **HYSSOP**, attend to. **KALE** (SEA), earth-stir, or carefully fork up among the old crowns, if not done before; look over seedlings, and where sown in patches to remain, thin out and attend to. **KIDNEY-BEANS** (Dwarfs) and **RUNNERS**, sow main crops at the b., or transplant from hotbeds; make another sowing e. of the month for succession; attend to protection in case of frosty nights. **LEeks**, thin out early or transplant; leave for seed. **LETTUCES**, sow every fortnight; plant out and tie a few every week, and mark some of the best, or any favourite kinds that have stood the winter, for seed. **MARIGOLDS**, sow. **MAJORAM**, (Sweet), see *Basil* (common garden), may plant and keep clear of weeds. **MELONS**, sow b.; pot off and ridge out in succession; attend to setting fruit, thinning, topping, earthing-up, and watering the advancing crops. **MINT**, plant out new beds where required; if short of rooted plants, cuttings will root easily at this season, if planted and well watered. **MUSHROOM-BEDS** should be made in the coolest situations at this season; attend to those in bearing. **MUSTARD** and **CRESS**, sow in succession where required. **NASTURTIUMS**, sow without delay, if not done before. **ONIONS**, weed; keep the surface-earth loosened; a small fine-toothed iron rake will be found an excellent tool for this and similar purposes; (Welsh) leave for seed. **PARSLEY**, sow; thin out *Hamburgh*, and leave for seed. **PARNIPS**, thin, and earth loosen. **PEAS**, sow in succession; draw up earth along each side of the rows before sticking, in case soakings of water should be required; sticking attend to in time. **PENNYROYAL** may be planted in a cool situation. **POMPIONS**, sow, or plant out under hand-glass, upon a little bottom-heat. **POTATOES**, hoe amongst with care not to injure the young fibre. **PURLANE**, sow; leave for seed. **RADISHES**, sow in cold situations; and leave for seed. **RAPE**, sow for salading; (edible-rooted) sow, e. **ROSEMARY** and **RUE**, may plant. **SAGE**, may plant; cuttings root readily at this season if planted in a shady border and well watered. **SALSAFY** and **SCORZONERA**, sow main crop b. **SUMMER SAVORY**, sow or plant out. **SAVOYS**, prick out, &c. **SPINACH**, sow and leave for seed, and thin out young crops. **TANSY** and **TARAGON**, may plant. **TOMATOES**, attend to for planting out e. of the month. **TURNIPS**, sow, thin out and leave for seed. **TURNIP CABBAGE**, sow. **VEGETABLE MARROW**, sow or ridge out under hand-glasses upon a little bottom-heat. Many frosty nights may be expected during May, therefore previously to planting out tender plants, remember how it is to be protected should cold or unkind weather set in.

T. WEAVER.

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WEEKLY CALENDAR.

D M	D W	MAY 1—7, 1855.	WEATHER NEAR LONDON IN 1853.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in Inches.						
1	TU	ST. PH. & JAS. PR. ARTH. B.	29.192—29.128	57—42	S.W.	16	IV	VII	4m21	15	3 0	121
2	W	[1850.]	29.467—29.167	60—41	S.W.	02	33	21	rises.	☺	3 7	122
3	TH	Colymbetes abbreviatus.	29.482—29.437	60—37	S.W.	01	31	23	9a35	17	3 14	123
4	F	Colymbetes obscurus.	29.663—29.540	65—27	S.W.	—	29	24	10 58	18	3 21	124
5	S	Gyrinus marinus.	29.694—29.666	63—28	S.W.	04	27	26	morn.	19	3 27	125
6	SUN	4 SUNDAY AFTER EASTER.	29.591—29.505	59—42	S.	—	25	28	0 11	20	3 32	126
7	M	Gyrinus elongatus.	29.598—29.512	61—44	S.	39	24	29	1 7	21	3 37	127

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 62.4°, and 41.1°, respectively. The greatest heat, 81°, occurred on the 6th, in 1852; and the lowest cold, 25°, on the 2nd, in 1852. During the period 114 days were fine, and on 82 rain fell.

THERE is a well-known narrative of an Oxfordshire farmer, who having been persuaded to attend a lecture on Agricultural Chemistry, and who, having no ear for the aspirate, nor any conception of the difference between an Ox-hide and an Oxide, declared that he did not believe that the lecturer nor any other human being could turn a piece of iron into the skin of an animal!

Another worthy cultivator of the soil, of whom we see no reason for Dorset to be proud, and who can draw a straighter line with his plough, probably, than with his pen, tells us, in a letter now before us, that he wishes for a good agricultural school for his son, but “not one where chemical farming is taught!”

These worthies of Oxford and Dorset represent a large class of the tillers of the soil, who undervalue science, either because they cannot comprehend what it teaches, or because they have met with teachers who ask of their hearers to estimate science at more than it is worth to the farmer.

There is no school in the British islands the master of which is so absurdly deficient in judgment as to teach “chemical farming.” But at Cirencester College, Mr. Nesbit's, and other places of education, the pupil is shown how much light the chemist's lamp can throw upon the path which practice shows he must tread.

Dr. Johnston, in his little volume entitled, “Instructions for the Analysis of Soils,”* very rationally observes that “it is often very difficult from an analysis alone to explain either the past agricultural history, the present money value, or how best to remedy the known defects of a soil; yet there are many practical points on which analysis does throw light, and modes of practical treatment which it serves at once either to discourage or to recommend.”

This very judicious little book, which we recommend our readers to read, and not merely to read but to study, briefly proceeds to point out, as follows, what chemistry can do for the cultivator of the soil:—

“On many accounts, it is desirable to know how much lime a soil contains. Soils rich in lime generally produce a sweet herbage, sound and nutritious green crops, and grain of a full ear and strong straw. To secure these advantages, the farmer is willing to apply lime; but the land may contain enough already, and to apply more might only be a waste; or it may contain little or none, and he may be about to apply too little. A simple analysis settles difficulties of this kind, determines the per-centage of lime, and points out what in the circumstances is best to be done.

“Again, the proportion of organic matter or combustibile

* “Instructions for the Analysis of Soils, Limestones, and Manures.” Third Edition. Blackwood and Sons. 1855.

matter in a soil regulates, in some degree, the dose of lime it is proper to add—the kind of mineral, vegetable, or other manure it may be proper to use upon it—and in the case of moorish or peaty soils, how far clay or sand would be likely to improve it. Hence it is desirable to know what per-centage of organic matter a soil contains.

“Again, a poor soil has sometimes much resemblance to clay, and yet, on chemical examination, proves to consist mainly of a very fine sand. To ascertain this, is to determine at once how the soil may be improved. Or a soil may be found, upon analysis, to be too strongly impregnated with oxide of iron, or to contain peculiarly noxious combinations of iron, or to be too rich in common salt; and each of these results of analysis indicates to the skilful man the steps which will most quickly or economically bring the several soils into a fertile condition.”

We have said that we recommend our readers to study Dr. Johnston's volume, and we so recommend, because we know in no art or pursuit in life is any one of its practices either so well remembered, or so well performed, as that practice of which the reasons on which it is founded are known, and the causes of its results can be defined by the practitioner.

We have an example ready to our hand. In a very fertile garden one portion produced early crops, and crops more luxuriant even in dry summers than another portion of the same garden, though the aspects, elevations, drainage, culture, and seed employed, were entirely alike. We recommended the portion that produced the later and less luxuriant crops to be trenched two spades deep, and the bottom spit to be brought to the surface. It was done, and as we foretold, it produced crops as early, and as capable of enduring summer drought as were the characteristics of the other portion of the garden. Now, why was this? Simply because we knew that by such trenching a darker soil would be brought to the surface. The darker-coloured a soil is, the sooner does it become heated by the sun's rays. Hence its excellence in producing early crops. Again, the darker-coloured a soil is, the colder does it become at night; in other words, it radiates or gives out heat faster than a lighter-coloured soil; consequently, the dew and mists fall faster and more abundantly on that colder soil; hence, it better preserves the verdure and luxuriance of its crops in dry summers.

THE EMPEROR AND EMPRESS OF THE
FRENCH AND THE QUEEN OF ENGLAND
AT THE CRYSTAL PALACE—APRIL 20.

I HAD some thoughts of going to see the Crystal Palace at the beginning of April, but the weather was

so uncertain, that I put off the visit, from day to day, till I heard of the Emperor's visit to England, and then, judging that he would go to see the Crystal Palace, I put off my intentions till the grand day, knowing, that on much smaller occasions gardeners generally put the best foot foremost, and that I could see the Palace and gardens in apple-pie order. But when I learned that none but season-ticket holders would be admitted on the occasion, I made up my mind for a grand treat, without much crowding, and resolved to see everything that could be seen with my own eyes.

As soon as it was announced that Her Majesty would take her Imperial visitors to see the Crystal Palace, the managers sent out special tickets for the occasion to the shareholders, and if they, and the season-ticket holders, were the only parties who could see the grand sight, I thought the company must be out of pocket. But they managed much better:—they kept to the strict letter of the law, but pleased everybody who had a mind to be gratified for twenty-one shillings; and thus they made a handsome sum of it, which I have heard variously estimated at from eight to twelve thousand pounds. There were yet a few days to the expiration of the season tickets of 1854—they expired on the 30th of April; and all that you had to do at any of the entrances to the garden was to buy a "family season ticket," which would last for ten days; see that the "family" consisted of one person only; pay 21s. for it; pass the barrier, and swim among the crowds into any parts of the park and gardens, but not into the Palace till the Imperial and Royal visitors were once round at their leisure. Nothing could be more satisfactory, if you leave out of the question that fools and rogues could get in on equal terms with honest folks.

To make sure of a "true and particular account," I went to see the rules at all the entrances, public and private. I even went to the secretary's office, at the side of the north entrance to the middle transept, where I had a very polite invitation to join the gentlemen of the press, in a private room, till the arrival of the Queen and party; but I had two good reasons for telling that I had "other fish to fry." In the first place, I should have to pay for half-a-dozen of wine, to drink the Emperor's health, and to pay for my own "footing" of equality with the said gentlemen; and, on the other hand, they would vote me into the chair, to get a leaf out of my book about the garden, when all was over; and that might involve a night's lodging in London, at the "Gardener's Arms." I was most anxious to see under the Palace—the Paxton Tunnel, the boilers, flues, and all that is out of sight,—therefore I chose to go in by the "Tunnel Entrance;" asked for a season-ticket, and was asked, in return, if it was for a lady or a gentleman. I said, "Yes," of course, and got No. 26,861; then, after putting my watch and what little money I had about me into the safety valve, I entered the lower regions, where I saw a man in his shirt sleeves, and,—but I must say no more of that, as, perhaps, I may have broken the law without knowing it.

On getting out on the terrace, shortly after nine o'clock, the scene was most animating—thousands and thousands were coming up, in one continuous crowd, on all the walks leading from the different entrances, while from the tunnel entrance the stream seemed to come up from another world. Before half-past twelve, when the grand attraction was announced, there could not be much short of 30,000 persons in the garden, and chiefly on the terraces. The crowd in front of the great middle transept by this time was terrific, but as orderly as if they were in a Cathedral. Several ladies fainted, and were carried back over the shoulders of the multitude. The police were round about, and in all parts of the crowd, in their very best smiles; all the pulling and pushing they had to endure here, and at the barriers

and doors, never produced a hasty word or an angry look, that I could see, all that day.

The bands on the lower terrace, and companies of soldiers, with flags and glittering armour, were straining their instruments and panoplies of war to attract the crowds from the pressure on the upper terrace, but almost all to no avail. Were the bombardment of Sabastopol going on at the bottom of the grounds, the mighty masses on these terraces would not lose the chance of seeing the Emperor instead.

In the centre of the open colonnade, over the grand entrance from the garden into the great transept, a Crystal-Palace-fashion pavilion was erected, which communicated with the middle of the transept by a passage, which opened through rich folds of purple velvet. Through this passage Prince Albert led the Empress out into the open pavilion directly over the centre of the crowd; Her Majesty, leaning on the arm of the Emperor, following. The crowd burst into a deafening cheering, which lasted the whole time the party were in sight. Of the four, I think Her Majesty was the most pleased. Prince Albert with great animation, was pointing out to the Empress the best points in the distant landscape, and Her Majesty was most earnest in her attention to the Emperor. There was a small sofa and two chairs in the pavilion, but none of the party sat down. They acknowledged the uproar repeatedly, although they could hardly hear themselves speak. You could not tell who had the most cheering; but as the party were leaving the pavilion, "the Queen! the Queen! the Queen!" burst forth from at least 30,000 persons at once. I never saw such a sight before. Her Majesty turned round to the crowd, advanced a step or two, and with that earnest expression which she knows so well how to bestow, she curtsied three times as low as she could strain, holding out one hand towards the crowd, and the other after the Emperor. The effect was magic itself; it would pierce the heart of the hardest republican on earth, and reconcile him to a monarchy on the spot.

Soon after this they retired to luncheon, and the doors were opened; but it took more than an hour-and-a-half to pass the whole multitude into the Palace. Here, again, the police were put on their metal, but they were in better humour than ever, and everybody vied with everybody else to make the best of the time and space. The whole bottom-floor of the Palace, and large spaces in the gardens, were crammed from end to end, except a small space in the centre of the avenues, which was reserved for the public procession of their Majesties and suites. Along these open vistas, crimson cloth was laid down and fastened like carpets.

When all the arrangements for the public promenade were completed, Prince Albert led the Empress from the luncheon-table, leaning on his right arm, and Her Majesty took the left arm of the Emperor, making the second pair in the procession, and there were seven other pairs followed. They entered the avenue in the nave, at the bronze fountain, near the extreme east end of the building, and walked westwards to the centre of the great transept, where they turned to the north, and walked up a flight of steps to a square platform, called a dais, on which were four chairs, which were covered with green damask, the frames being of gold or gold gilt; here they sat for a while, listening to the strains of a band in the south side of this transept, deafening cheers resounding all round them; then they descended for the other half of the promenade, walking westwards to the Crystal Fountain, round the south side of it, passed north, in front of the Screen of the Kings and Queens, then turning eastwards on the north side of the Crystal Fountain, and to the left, along the south transept to the north door, through which they left the

Palace, after being almost stunned with joyous greetings along the whole route.

The Empress is rather above the middle height, with a fine, open, pleasant countenance, regular, but not sharp features. You would call her handsome, without being a showy woman. She was not the best, nor the second best dressed lady there, but she evidently understands the art,—which seems the most difficult art to learn in this country,—the art of wearing or carrying her dress properly. After a great deal of fatigue, of riding and walking, of sittings down, and bowings to this side and that, acknowledging the greetings of the people, she swept round the Crystal Fountain, late in the afternoon, just as if she had that moment been turned out of a mould; the sun was then full in her face, and behind my head, which was not ten feet from her, and I could not compare the skirt of her dress to anything so like as to a florist's Tulip turned upside down; it was full length, but the bottom of it did not sweep the carpet; it was of dark lilac silk, flounced up to the waist, all the flounces being of equal depth, and at the bottom of each flounce was a satin stripe, or flower of a lighter tint; over this she wore a shawl of black lace, the point reaching down to very near the bottom of the dress; the bonnet was small, and of white chip, with a simple roll of trimming to match the dress. It has been said that the Empress Eugenie was the inventor of the fashion of wearing the bonnet behind the head; if so, she has given up that fashion already, for the little chip was well forward this time. Her front hair, which is neither light brown nor jet black, she wore plain, just as Queen Victoria always does. Her parasol was white, with a small short fringe. The most noticeable articles of dress in the crowd were Mantillas, Cardinals, and Opera Cloaks.

The Emperor Napoleon must be hard upon fifty years of age, and yet he looks much younger than Prince Albert. I never saw him before, and I never was so much deceived in a man in my life; his face and forehead sets every rule of phrenology at defiance. If I had seen him among a crowd of students going to a botanical lecture, I should say he was the most studious-like of the lot, and the last man on earth to quell a mob! There is not a single line in his face, nor a glance in the eye, from which you could infer decision of character. There is not a good portrait of him in a shop in London. He shaves his whiskers, and has a very small moustache on the upper lip; his face looks mild to excess, is a little sallow, and of the true Italian caste; his hair is dark brown, as thick as when he left school, and he wears it, or at least wore it that day, in our fashion, the usual open channel up from the left brow, and the front combed to the right, the rest perfectly plain all round; he is rather below the middle height. He and Prince Albert wore a black, or dark blue dress throughout.

Perhaps I ought to make an apology for taking down such notes at all, but I am of a very different opinion from those who may blame me; thousands of my young readers will be more gratified with them than with all the *magnifloras* and *magnificas* in the catalogue; and it is wholesome to please as well as to instruct. Besides, through some oversight or another, the daily press have been on the wrong scent all that day, and while I was taking these notes I could do nothing else; but I spent three hours examining every part of the garden and grounds, and nearly two hours looking over the plants inside the Crystal Palace; and here is the result.

I found all the vases on the upper terrace, opposite the middle transept, and along the flights of steps down from it, were most tastefully furnished with flowering-plants, arranged on one uniform plan, like all things in and about the Crystal Palace, as follows: the centre of each row was filled with a pale Rose Rhododendron in

bloom; low, bushy plants, trained like specimen Geraniums; then another ring of *Tom Thumb* Geraniums; these were bordered with the little hardy Heath, called *herbacea*; probably cut sprigs, as they stood upright, and an edging or wreath of Ivy, three inches high, round the outside of all. There were a score or so filled in that way, and as you receded from the centre of attraction, the vases were merely filled with plain Rhododendrons, of the same size and similarly trained, without any flowers; the whole had an air of taste and comfort about it which paid for all the trouble and expence twice over. The whole of the terrace-gardens were fresh mowed, and as smooth as velvet; but the walks are harsh to travel on after the concrete walks, because, roll how they may, and as often as they choose, such a concourse of people are sure to kick them up into rough pebbles in a few hours; but there were heaps of better binding looking gravel in many parts of the lower grounds. It will be a thousand pities if they cannot keep a smooth surface to the gravel in such a garden.

Almost all the flower beds on the terrace are planted with early dwarf Tulips, Hyacinths, and Crocuses, some in mixed colours, and some of one colour only, but generally with an edging of the same bulb in a different colour. White Hyacinths mixed with pale yellow ones, and the bed edged with blue Hyacinths, look extremely gay, and would look still better if all the so-called yellow ones were placed by themselves, between the whites in the centre and the dark blue edging. This is not a matter of taste, but of necessity, as these yellows are of smaller growth, they look low and overpowered by the stronger growth of the whites. The Tulips were not in bloom, but one here and there was just showing colour; when they are fully out the garden will look one blaze of them; the chain pattern in the sunk pannels on either side of the central walk, which was so gay last autumn with scarlet and yellow, is now full of Tulips all round, except a few Hyacinths in the centre of each of the circular links of the chain; and the connecting bars between the links or beds, which were planted with *Emma* Verbenas last year, are now full of Crocuses going out of blossom, so that the effect of those parts in the chain will be lost this year—all the pattern ought to be in bloom at once; and thus it was since Adam lived, by aiming at too much we are apt to overshoot the mark, and in nothing under the sun so much as in flower-gardening; one wrong bed, or one wrong colour, will often spoil a whole composition, however good in itself.

The four large corner beds, in each of the sunk end pannels, under the banks of Calceolarias, are now planted with two beds of Hyacinths, cross corner fashion, and two beds of Tulips. The two banks which were full of yellow Calceolarias last year are now empty, excepting the edging of blue *Gentianella*, which had not then opened. Several good crimson hybrid Rhododendrons were coming into bloom in the different beds, and the only *extra* bed that I could see, was of *Cherianthus Marshallii*, which will not be in bloom for some time.

There is a grand improvement in the middle of the terrace garden since last autumn. I allude to the massive stone pedestals which have been placed in the centre of the large flower-beds, between the *Araucarias*, along the half-moon walk, on either side of the grand centre walk. Last year these circular beds were about eighteen feet in diameter, and there were seven of them on each side, with seven *Araucarias* centreing between them, and placed about fifty feet apart, so that the centre of the large flower-beds, in which the new pedestals are placed, must have been just fifty feet apart likewise, to correspond with the distances between the *Araucarias*. The effect of placing the pedestals in the centre of the flower-beds is this: it reduces the *actual* space for flowers to one-half the diameter they occupied

last year, say to eight or nine feet, without reducing the *apparent* diameter one inch. This is a grand improvement, which will be new to many thousands of those who have good gardens at home; and as I am going to recommend this style of bed for universal use, I shall describe it, so that any one may learn how to do it; but first of all, I shall give the history of it, as far as I know.

In the year 1843, Lady Middleton suggested this kind of bed to me for one of the statues in the garden at Shrubland Park. It was a bust on a pedestal, and might be seven or eight feet high. I think her ladyship told me that such beds were in use at Beton, by the Earl Brownlow, but I could not then see the advantage of it, and opposed it that year and the year following, but in 1845, Lady Middleton would not be opposed any longer by an obstinate old gardener, and I made the bed, planted it, and when I saw the effect, I was ashamed of my own dullness; but to make up for that, I took more pains with that bed every year till 1851, than with any bed in that part of the garden, and I can recommend it with confidence; but any one can now see fourteen beds on the same plan at the Crystal Palace, though the full effect cannot be understood from the Tulips, Hyacinths, and Crocuses with which they are now planted. Next August will be the time to study it.

If there is a sun-dial on a pedestal in your garden, a ring bed—which is the name of this style of bed—will very much improve the looks about the dial, and the same, if it is only a flag-staff, or if it is a figure of any man or woman, god or goddess, a full length figure, a bust, or merely a head, so that it stands on a pedestal which is not lower than three feet. It will not answer for a figure which stands merely on a plinth, because the lower parts of the figure would be hid by the flowers in the ring-bed.

All that settled, the next question is the size, that is, the diameter of the pedestal, if it is round, or the length of its sides, if it is square. Whatever the size of the pedestal, *half that size* should be in grass, on each side of it, for a diameter. It is very important to understand this part, for the whole depends on it. The pedestals at the Crystal Palace are square, and about five feet high; the side of the base or plinth is about four feet. I only guessed it. Now, what ought to be the diameter of the circle of grass on which this sized pedestal stands? You will understand, there is a circular piece of grass in the middle of a large circular flower-bed, and a square pedestal in the middle of the grass, and the flower-bed is a ring round the whole. The width of this ring of flowers, and the diameter of the grass circle, are determined by the size of the base of the pedestal. The pedestal, being four feet on the side, gives two feet of grass on each side of it, making eight feet across one side, as a diameter; therefore, the centre piece of grass is a circle, whose diameter is eight feet. The ring-bed should be as wide across as the square of the pedestal is in length; therefore, the beds at the Crystal Palace are just four feet across in every part of the ring, instead of being sixteen feet in diameter, if the pedestal and grass circle were not in the middle. When this ring-bed is full of Geraniums, or plants which are taller than Geraniums, a stranger looking at it from a short distance cannot see the grass in the centre, and he will think the bed is sixteen feet through, for it looks just as big as one of that diameter; so that they will have the same effect with fifty plants as one hundred plants would give in a circle without the grass in the middle. It is for this economical view of the "ring-bed," that I would recommend it for universal use. I know it is all right; and now that it is patronised at the Crystal Palace, there can be no longer any doubt about the fashionability of it, if there is such a word.

The fourteen ring-beds are thus planted at the

Crystal Palace. A single row of Crocuses round the outside and round the inside of the ring, and five rows of Hyacinths, or seven rows of Tulips, between the Crocuses, and all these bulbs are put in as regular as compass work. There cannot be less than 20,000 Tulips and as many Hyacinths on this establishment at the present moment.

There is no progress to be reported yet in the growth of out-door plants since I saw them last September; but a great breadth has been planted since then, and the plants look as well as newly-planted things generally do. The great and heaviest works towards the bottom are completed, but there is a vast deal yet to finish; if they will clear up everything by next Christmas it is all they can expect. There are about 450 men now employed on the different parts. The late laid turf is mulched with a good coat of pulverized earth,—an excellent plan. The parts which have been laid down in grass, from seeds, look remarkably free from weeds. Great care must have been taken in laying clean, fresh soil on the top, and the grass-seeds must have been very clean and true to kind. Whoever supplied them with the seeds may be as proud of their stock as the gardeners may be for the care with which they managed the ground for the grass. I never saw such work so satisfactorily performed.

The huge beasts before the flood have been painted, and look as unearthly as water *kelpies*. The geological strata, in the face of a rugged bank behind them, look as if a section of natural strata had been made on purpose; and there is a stalactic grotto here, where different veins of ore run as naturally as they do in the mines. The rough bank is traversed by winding walks, with many flights of rustic steps, here and there, to answer the variations of levels. These steps are fronted with larch, about six inches in diameter, with the bark on. Here many an amateur will get his eyes opened as to how he may cheaply introduce such walks in his own declivities. These banks are gay with native Primroses, Coltsfoot, and Wood Anemone, which are the natural weeds in the woods of Sydenham. Then there are Foxglove, Pilewort, Periwinkles, and such-like, in great abundance.

Then there are block-banks and rockeries, a wilderness, regular shrubberies, besides beds of the best shrubs. When all these have six or seven years' growth, the grounds of the Crystal Palace will be the pride of England, and nowhere else to be matched.

All the basins were low of water, except round the "Antilurians," as country people say. The great lakes below the cascades were quite dry, and the water-pipes were being laid down there. It was part of the grand sight to have the fountains play in the terrace garden; but, unfortunately, that very morning, as they were proving the pipes, one of them burst off the capping, and spoiled that part of the fun; but they made such repairs as enabled them to play the fountains for a short time after the crowds entered the Palace, but very few of us could then move to see them. The royal and right royal party saw them, however; and we had seen enough without them.

INSIDE THE PALACE.

The arrangements for heating the Palace was a good hit at the first start, judging from the appearance of the plants. Every plant in the house looks as well as can be, except a few stove plants at the east end; but even here, three or four of the Egyptian Palms, which were as dry as skeletons last September, have shot forth leaves at the top a yard long from the centre of the columnar trunks. Let us hope all of them will start this summer; Palms being, of all stove plants, the most appropriate for this part of the house. The beds and vases round the bronze fountain at this end were filled

with dwarf Palms, except the two first at the west end of the basin, which was filled with "furnishing" plants, such as *Geraniums*, *Cinerarias*, *Hyacinths*, *Cytisus racemosus*, and *Dielytra spectabilis*. The basin itself was gay with blue Water Lilies, or Nymphaeas.

The dais, or raised platform, where their Majesties sat down, was well furnished with flowering plants in pots all round the bottom. Here some *Acacia armata* were well placed in the angles; indeed, the furnishers throughout had their wits about them. All their plants were placed in such ways as to tell best. Rhododendrons and Camellias, in bloom, forced Persian Lilac, Epacris, *Cytisus racemosus* in abundance, with Hyacinths, Tulips, *Cinerarias*, *Geraniums*, and large herbaceous Calceolarias, were also in the groups round the dais.

I must here stop to say, that in all cases and places where the *Cytisus racemosus* (or deep yellow) is used for mere show, about one-third the number of *Coronilla glauca* (sulphur-yellow) ought to be introduced as well. No one who has not seen the effect of large masses of these two plants together can possibly conceive how they improve each other. The *Cytisus* may be compared to the *Calceolaria rugosa*, and the *Coronilla* to *Calceolaria amplexicaulis*. I saw them both in profusion, the other day, in the conservatory at Bank Grove, and I can vouch for the improvement.

The crystal fountain and basin seem to be the favourites; the beds and vases round them were quite brilliant with gay spring flowers as thick as they could stand—Water Lilies all round the basin, and the Victoria Lily coming on in the centre.

The Camellias and Rhododendrons, all over the house, could not look better. The large Orange-trees, which were kept inside last year, have just increased double their value since I saw them last September; their leaves "shine again." But the experiment of placing Orange-trees in bad health out on the terrace, last summer, was a dead failure: the poor things look half starved to this day. But when Orange-trees are up in good health, and get no more heat in winter than these, a few months out-of-doors would even improve them; but no man in his senses would place a sickly Orange-tree out-of-doors in England.

The Norfolk Island Pine is the handsomest tree in the Palace; some of them are really splendid. The one they had from the conservatory of the Horticultural Society last autumn looks mumpish; but there is no fear of losing it, except the leader, but that is owing to the fact that the Society had to cut off the top to save the roof. The leaders which came after that were too tender to stand such a violent shock as the removal to Sydenham; but the tree will renew its leader as soon as it is established at the roots.

THE HANGING BASKETS.

Nothing can look more healthy than the old plants in the hanging baskets—the same plants which were in them last year,—they all stood except the *Tropæolums*, and have grown a good deal, some of them too much, since last September. The *Cobæas* have run up wonderfully; but if they were mine, I would have docked them at the beginning of April; but perhaps they are better as they are till the stronger climbers from the borders below come up, and do away with the necessity of basket climbers, except for the sake of the green. Altogether, the gardening of the Crystal Palace will, in a few years, be the standard in this country, if they go on according to this beginning. The frost and cold winds did not hurt them much. The frost will never harm them up there so much or so soon as down in the vallies and flat situations.

D. BEATON.

INSECTS ON FRUIT-TREES, AND THE CONSEQUENCES.

SURELY this in an affair which concerns everybody, from the possessor of an Apple-tree or two, to the owners of extensive fruit-gardens. One would really imagine, that after witnessing such havocs as are committed in our Apple-orchards, and our Hop-grounds, to say little of Kitchen-gardens, that the question as to the destructive influences of insects would at all times be considered a national affair. But we are all, at times, liable to fits of apathy; when the sun shines warm, and all nature seems happy, we willingly shut our eyes to the coming storm. In order to rouse such apathy, if possible, I may, perhaps, be permitted to point to a few of the disorders created in our fruit or kitchen-gardens by those almost microscopic rogues, which pass amongst gardeners under the anything but euphonious titles of Red Spider, Green Fly, Thrips, &c. These are the chief; but then we have the Scale, the American Blight, and other nuisances, amongst which the Bean Weevil is no trifle.

Let us here investigate the habits of the *aphides*, or Plant Lice. Our Peaches and Nectarines are almost sure to receive a visitation from these pests in the course of the year, if not in early spring. People are apt to look with a tolerable amount of unconcern on a leaf curling here and there, thinking, good souls, that it may pass away without any serious damage; but, behold, all this time a storm is brewing, and well would it be if they would take a lesson from the first cloud, which, as a messenger, points to the evil in store. Well; the pest passes on; it increases; and by-and-by the hitherto quiet spectator thinks that something ought to be done; he, therefore, betakes himself to tobacco, the best remedy we at present possess. We may now suppose it to be the early part of June, and the application, let us grant, has actually, at last, destroyed the *aphides*; but the consequences of their unmolested ravages have to be borne. The trees have yet to make another effort for the production of young spray, for the root is impatient for a reciprocity of action. This later growth, however, is destined never to become hardened in that degree, which not only secures soundly-formed blossoms for the ensuing year, but influences the very constitution of the tree for ensuing years.

But not only Peaches; let us remark, on the havoc these *aphides* make amongst our trained Plums, Cherries, &c. How frequently we see the points of the young shoots completely smothered with them, and becoming distorted before the shoots have extended half-a-dozen inches, and, subsequently, the whole system of the tree perverted, appearing as though half-scorched. This is a sad affair, in particular where the trees are somewhat young, and the walls, or spaces, allotted to them badly covered.

Then the *Red Spider*; this and the *aphides* act conjunctively in the work of destruction; the *aphides* impeding the early growth and corrupting the system of the tree, and the *Red Spider*, following in their wake, abstracting what little elaborated sap the tree may possess, robs both the fruit of the present season, and the blossom-buds for the future crops then in the course of formation.

The *American Blight* is another formidable enemy; his ravages, however, are confined at present to the Apple and Pear. It is somewhat singular that this sad pest had entirely confined his ravages to the Apple until the last dozen years or so; at least, I am not aware of having seen Pears attacked in my younger days. I remember that the first of its attacks on the Pear were pointed out to me by the late celebrated Mr. Wilmot, the market-gardener, at Isleworth. In going over his gardens, with my friend Mr. Glendinning, about a dozen years since, Mr. W. showed us a lot of the

Winter Neilis Pear, which were as badly attacked by them as ever I saw an Apple-tree, at the same time expressing his astonishment at this insect attacking Pears. Since then, I have had my *Winter Neilis* Pears severely attacked by it, and no other kind. This coincidence is curious enough, and I should much like to hear, through the medium of THE COTTAGE GARDENER, if any one else has had the Pear attacked, and what kind.

Thrips are great pests, but their labours are principally confined to hothouses, where, amongst the Kidney Beans, Cucumbers, Roses, Azaleas, &c., they prove, at times, a serious evil.

To overcome the *aphides*, I know of nothing equal to tobacco-water, in the case of trained trees, supposing them to show symptoms of a general attack; when, however, only a shoot here and there is infested, tobacco may be economised by dipping them in a bowl. Shag-tobacco is the most sure, and cheaper in the end than tobacco-paper, three parts of which is mere rubbish. I have been in the habit of using five ounces to the gallon, and have found that by having at least half the gallon of ordinary soap-suds, the tobacco goes farther, and does more execution.

Red Spider, everybody knows is best combatted by sulphur; but there are various modes of applying this. If applied in a dry state, out-doors, a great portion is liable to be drifted away by air currents, or to settle on the ground by the mere force of gravitation. My favourite practice is to apply it by the syringe in a fluid state; but then I mix other ingredients with it. During the last month I have syringed nearly all my walls with what may be termed a kind of grouting material, composed of soap, water, sulphur, and lime, thickened with clay; the latter so finely divided as to pass through Reid's Patent Syringe. I shall report, in these pages, in due time, what success I have in the preventive way, and in the mean time I freely confess that I expect great things.

It is known to plant-growers that the *Azalea indica*, and its varieties, are very liable to the attacks of a minute kind of *thrip*, and that it is somewhat difficult to get rid of. A friend, in high practice, on whom I can rely, tells me that he has conquered it with ease by the following process. The plants are first fumigated, and on the heels of this operation they are turned on their sides, and well watered with a mixture of soap, water, and sulphur; the former, two ounces to a gallon, and charged with as much sulphur as it will carry. The plants, when battered by syringing on one side, are turned, and the other side served the same, and they are then placed in some pit, or close place, where they can be shaded, and no air given for a week after the operation. Now, this may furnish a hint for the handling of Thrip in other cases.

As for the *American Blight*, I feel assured that the best way to deal with is to syringe carefully every November, and again in April, with a sort of grouting mixture, the chief article in which should be stable-liquid, undiluted as far as water is concerned, and with the addition of soft-soap three ounces to the gallon, and thick clay-water to fill crevices. It is of no use talking of brushes, the mixture must insinuate itself into every crevice.

R. ERRINGTON.

BLACK PRINCE STRAWBERRY FOR FORCING.

THERE is much gained often by comparing notes. More would often be gained were we magnanimous enough to own our failures and confess our mistakes. When the reasons of these can be assigned, they act as preventives to disappointment and errors. Mr. Beaton tells us that pots of the above Strawberry were exhibited in Regent Street, to show the inapplicability of the kind

for forcing. Last year, I could easily have done the same, as the fruit seemed to be poor and insipid, and the foliage liable alike to mildew and Red Spider. Some friends of mine were extra successful, and spoke cheerfully in consequence. Instead of the fruit being soft and pale red in colour, theirs was firm as a bit of cheese, and of such a dark, healthy appearance, almost warranting the appellation "*black*." I mused and thought over the matter, until the proved extra hardiness of the plant, in blooming and fruiting late in autumn out-of-doors, offered me a seeming solution of the difficulty. I attributed my success, this season, to giving it comparatively a low temperature and plenty of air. Though the sun was allowed to raise the thermometer considerably, the heat at night was seldom above 50° to 55°, as often at 45°. Thus treated, after being properly prepared, the plants may be said to be ever bearing, as by the time that some trusses of bloom have set their flowers others will be showing, so that ripe fruit, green fruit, and flowers, are very commonly seen on one plant. I find that some people prefer the flavour to Keen's. The finest fruit are equal in size to the middle-sized fruit of that excellent variety. I cannot say that I should like to grow much of it after Keen's come in plentifully; but as a first and easily obtainable supply, I think the *Prince* invaluable.

I consider it more necessary to make this statement, from having spoken doubtfully of it last season. With the requisite amount of air, and a night temperature not exceeding 55°, until the flowers are set, a few more degrees afterwards, if speed is essential, and a fair amount of sunshine, there is little difficulty in having this fruit at the new year; though Strawberries, before the first days of March, in general, are more pleasant to look at than to eat. For many of our readers, with little room, and whose whole glass may be considered an intermediate house, or a warm greenhouse, with an average night temperature of about 50°, this Strawberry will answer well, producing about the middle of March and onwards, if placed in the house about Christmas. Its habit of continuous bearing is also of much importance in all such circumstances. If so treated, the plants will be the better of being several times dressed, removing the exhausted flower-stems, decaying leaves, a little of the surface-soil, adding fresh compost, and, above all, using frequently weak manure-water. When you are tired of them in the house, plant them out-of-doors in a good position; and here, for the purpose of securing good early runners, the first flowers that appear should be nipped off. After you have obtained what runners you require, these may be cut off as they appear, and the flowers be allowed to come, and thus you may get nice fruit in September and October.

As some readers may wish to try them the ensuing season, I will mention the course I have adopted with success. As soon as the runners show themselves, they are fixed, with a bit of stone, pebble, &c., in the middle of a 60-sized pot, filled with light, rich earth, and duly watered. As soon as these pots are nearly filled with roots, the strings are cut, and the plants collected, and set for a few days in a shady place, until they can depend entirely on their own roots for support. The pots are then moved into more direct light, and, when used to it, they are transferred into their fruiting pots, which are generally termed 48's. I attribute much of the success to the size of the pot, when fruit is wanted very early. Good early Strawberries depend greatly on the early ripening of the buds; but in large pots the plant keeps growing too long, and the maturing process is retarded. There is something, also, in the mode of potting. The soil is chiefly fresh hazelly loam, with a little rotten dung; the pots are properly drained; the plant is set well up in the pot, so that its neck stands rather above than below the rim, and the fresh soil is packed round the ball as firmly as possible. The pots are then set in

a sunny spot and on a hard bottom. Water must not be withheld, and in hot weather they will require a bountiful supply. As the dewy nights of autumn come on they will want little. They should receive few showers after the first week in October, but be laid on their broadsides, and raised again to the sun. If they could be so placed, in the beginning of November and onwards, as alike to be protected from rains, sun, and frosts, they will succeed all the better. When wanted very early, the plants should be laid down on the north side of a wall by the end of October. If previously well-ripened by exposure to the sun, this will give them a longer period of rest before starting them afresh. Thus treated, and started into fresh growth gradually, success will be likely to be the result. A frame, or pit, with a slight amount of bottom-heat, such as an exhausted hotbed would produce, would answer extremely well. Much bottom-heat from fresh fermenting matter will be likely to mar the whole affair. I have thus detailed what my own practice would point to as the causes of failure and success, and if some others do the same, there may be something like certainty gained as to the forcing of this variety, so suitable to the circumstances of many.

GOLDEN CHAIN GERANIUM.

Many have got this pretty-leaved variety, so suitable for rings and edgings, but they cannot get along with it—their stock hardly increasing at all. I acted very foolishly with it last autumn. I had tried it several times in summer and autumn, in the way of propagation, and with but little success. Not liking to be beaten, I and my young man together tried ever so many plans, in August and September, to strike it, and a very little room would hold all the plants we got. I seldom have met with a greater deceiver. You may go, day after day, and find everything looking bright and hopeful, and you get to flattering yourself that you have managed the shy thing at last, when some fine morning, ere long, you find all your hopes annihilated. I was well aware of what Mr. Beaton told us, that it is easiest propagated in the spring. The regrets, in my case are, that in our numerous plans we docked the plants so much for cuttings in autumn, that we could obtain but few cuttings in spring. These, however, as a whole, have done well. We think that even in spring propagating there are two little notches. First, that the cuttings, after being inserted, should be plunged in a sweet, gentle hotbed of about 75°, with a top temperature of from 55° to 60°; and secondly, that the cuttings should be made by March instead of afterwards. Those we put in last have not done quite so well as the early ones. Very small young pieces are apt to damp off. Let our trials last summer, therefore, operate as a warning. Whether in pots, plunged, or rather planted out, in good rich soil, encourage growth as much as possible, but touch not a shoot in the way of a cutting. Let the plants be housed early, before frost, and cut not off nor mutilate a single shoot. Keep them just as dry as will prevent them flagging in winter; and in sunny days, sprinkle the foliage instead of saturating too much the roots. An average temperature of 45°, at least, will be necessary. This treatment will give you firm, hard shoots, with but small amount of foliage. You may shorten all these shoots freely in March, or earlier. A few degrees rise in temperature will soon cause the old plants to break and grow freely before planting out time. Every two or three inches of these shoots cut off will be likely to give you a plant, if treated as recommended above. Select young shoots formed in spring, without a good heel of the older wood, and you run a good chance of being disappointed. Had I not tried and tried again to get plants in summer and autumn; had I not been

unable to say the word No, when cuttings were asked from me then; and which I have since learned seldom rewarded the labour of carrying them home, and thus stumped in my plants,—I could as easily have struck hundreds this spring as tens. To every one, therefore, itching to try his striking powers on this plant, and who wished every tit-bit to live—without interfering in the doing what he likes with his own—I would merely hint that my failures and success unitedly say—make your store plants as big as you can before winter, and put not a cutting in before spring. Some friends of mine recommend placing the cuttings at first in a cool position, before the base begins to swell; but I have found them do best, when the wood was firm enough, in placing them in a fairish bottom-heat at first. I understand that Mr. Fleming has a freer growing variety of this *Golden Chain*, and rather better every way; and if so, it must be a great acquisition for edgings in flower-gardens.

PINK CUP GERANIUM.

This, in its way, is a beautiful gem. The foliage is smaller, thick, and succulent, and more crumpled and cupped than *Mangle's Variegated*. There is no comparison in the flowers; those of the *Pink Cup* are larger, firmer, and the plant altogether is of a more compact form. There have been various complaints respecting want of success with this beautiful gem, both as respects propagating and growing. To make a fine effect in a bed, it should be planted thick, nine to twelve inches apart. It has nothing of the rampant growth of *Mangle's Variegated*. Even when planted thickly, two things are essential to a fine display; first, what is common to most of our garden flowers, plenty of sunshine; and secondly, plenty of moisture. In a wetish season it will bloom better than almost any other Geranium. In a dry season, the nearer it is to a tank or a pump, the better chance it will have of getting what it likes. I have never seen it do better than when treated almost as a marsh plant. In propagating some of it last autumn, the cuttings were placed in a shady place in a cold pit, and well and regularly supplied with water. This spring, cuttings, after being placed in well-drained receptacles, were watered every day; nothing could have succeeded better. It is next to impossible, in these circumstances, to overdo this little thing with water. If kept moist at the roots in fine sunny weather it will present a continuous dense mass of pink flowers, relieved with singular crumpled, cupped, and silver-edged foliage. If allowed to become very dry, the flowers will be thin and scattered. The same amount of moisture, in the case of *Mangle's* and Geraniums in general, would give you foliage instead of bloom. When I used to grow it largely, whenever there were signs of hot, dry weather, the beds were well watered, and immediately mulched with dry, riddled, old Mushroom-dung, to prevent the moisture evaporating. This little fact about the water pail, will, I trust, give this beautiful plant a better chance for a place in our flower-gardens.

PINK IVY-LEAVED GERANIUM.

"I grew this last season, after being highly recommended. It gave me a vast amount of trouble to get it, and what a miserable affair it turned out,—long, rampant shoots, fit to mount a fortress-wall, and flowers few and small. Is this the true *Ivy-leaved*?" There are two varieties, and no doubt you have got the wrong one. The best has good trusses of pink flowers, just not so bright as the *Pink Cup*; the leaves are larger, and it is more inclined to crawl than to mount. It is, however, rather compact in its habit, and not nearly so rampant as *Mangle's Variegated*. On poorish soil, it makes a beautiful pinkish bed of from twelve inches in height.

I had long discarded the other variety as next to useless, and I received cuttings of this very desirable one several years ago, from Mr. Snow, at Earl de Grey's, Wrest Park. It is now, I believe, common enough, and when well managed, is really beautiful, either as a bed or edging. When well established, unlike the *Pink Cup*, the less it sees of water the better it will flower, provided it be not actually starved. The flowers and trusses are double the size of the inferior variety, and produced in something like six-fold more abundance. Get this, and the sooner the tops and roots of the other enrich your rubbish-heap, the more reason you will have to be thankful. With all my dislike to mere amplification of nomenclature, I wish there were some means of distinguishing superior from inferior varieties; for sorry I am to add, that four correspondents, above asking for cuttings, had sent for a dozen or so of each of this pink plant, and received and grew the miserable inferior variety; and that, chiefly, because I had recommended it to their notice. Would that we could cure all the evils and disappointments we innocently create!

RUBBISH HEAPS.

The mention of this, a few lines above, brought one or two facts to my mind. If at times we get into a careless gossiping mode, the supporters of this work are quite as much to blame as we. Their patience and kindness seem next to unbounded. We never could get on at all were we to reflect into whose hands our musings must come. We can only get on by just feeling, when we seize the quill, that we are talking away to a neighbour gossiping crony. The allusion to *rubbish* heaps has given offence to a few of our fine-nerved readers; and yet one of these last season confessed he had mistaken the whole matter, when he saw the multifarious uses to which the rubbish heap was subjected, and the care that was exercised over it. He confessed he never imagined such small matters, such shifts, and moves, and attention to trifles, were at all likely to be met with in gentlemen's gardens. He saw the importance of everything, when it did not please the eye, being transferred to the rubbish heap, when that *omnium gatherum* was made the groundwork of future compost heaps, and a substitute for manure. I long foresaw that the introduction of hot-water *versus* dung would leave the gardeners considerably at the mercy of what they themselves could afford, and hence the anxiety to get every particle of soil and vegetable matter into the useful rubbish-heap, instead of lying here, and kicking about there to no beneficial purpose. The time seems fast coming, when, if the gardener, by hook or by crook, cannot muster a good rubbish-heap, and use it well, too, the glory of the garden will be gone. Already, I am sorry to say, the speaking of manure for a garden under the old name dung, is treated in many cases as if it was fairly placed among the *obsoletes*. It is amazing what of the beneficial and the useful the rubbish-heap may be made to contain, if well looked after and incorporated.

PETUNIAS SUDDENLY GOING OFF.

The complaints on this subject last season were endless, and now numerous inquiries appear, as to how it is to be prevented. I can fully sympathise in this case. At one time I used to grow these as specimens in pots, and in their case, as well as when planted in beds, a plant would die off suddenly without any apparent cause. There are some grounds in which this rarely happens, and others again in which it is very common. I question if, in the latter, it is easy to prevent it entirely. The best solution I have found, is to treat the plant either as a tender annual, by sowing the seeds, or by doing the next best thing—choosing very young

plants for either pots or beds. From young, bushy plants, struck in March or April, I do not recollect ever having a failure in pots, and very seldom in beds. Seeds carefully chosen will come pretty good, and from these I have seldom seen blanks. Old plants kept over the winter, in however healthy and bushy state, are apt to go off—sometimes after they have been potted or planted out. I do not profess to know why this frequently takes place in certain positions. Treating the plant as an annual as much as possible is the best remedy I have found. When the particular colour, or variety, is a matter of importance, this can only be secured by cuttings; but as a great preventive of future disappointment, I would advise using the plants struck in autumn as so many store plants to be thrown away in spring, after enough of cuttings had been obtained in March and April. These will then root quickly in a mild hot-bed, and hardened off and stopped, will, ere long, make nice stubby plants, possessing all the freshness of youth, and less liable than older plants to casualties.

R. FISH.

KNOWESLEY PARK.

THE SEAT OF THE EARL OF DERBY.

THIS is one of what Loudon styles "first-rate residences." The mansion is very large and imposing, and stands on rather elevated ground, commanding extensive *views*. The park is spacious and well-wooded, though so near the sea. It is only about six miles from Liverpool.

I had to visit that neighbourhood lately, to arrange the plants in a new conservatory, belonging to G. C. Schwabe, Esq., at Handstyle House, about half-way between Knowesley and Liverpool. I hope shortly to give an account of this beautiful conservatory. On my return home, I called at Knowesley Gardens, and took a few notes of what I saw there, which I now propose to fill this sheet with, and send it to our Editor to fill a corner in *THE COTTAGE GARDENER*.

I have heard many gardeners say that these notices of gardens are interesting, and are read with great avidity by them. I have visited gardens in various parts of England and Wales; some in summer, when every thing in them was in their best trim; then, again, in the autumn, when the rich tints of the leaves of trees were glowing in the mild evening rays of the sun; and again, in winter, when all vegetable life out-of-doors was dormant, rendering the flowers of the greenhouse and stove more attractive and conspicuous by the contrast. I have written about gardens at all these seasons; but I do not recollect noticing one in print in early spring. Knowesley will be the first.

The gardens here are extensive, occupying, at a guess, about six acres. They are rough, well-sheltered on the north-east and west sides by trees. The walls are higher than in any garden I know, and are well-clothed with well-trained fruit-trees. Mr. Jennings has been the head-gardener for nearly twenty years, and he told me that he always acts upon Mr. Errington's ideas of retarding the blossoms on his wall-trees, by putting on his covers very early, before the buds begin to swell. By thus retarding the expansion of the bloom the flowers do not suffer so much from the spring frosts. The effect of this plan is so successful that he scarcely ever misses having a crop of good fruit. I saw them so protected on the 20th of March, the day I was there, and the shelters had been on for several weeks, thus preventing the blossoms being prematurely forced into flower by the early, warm sun, and sheltering them from the severe frosty night air. I have often seen the buds of the Apricot so frozen on the trees by night, and then

suddenly thawed by the warm, sunny days of February and March, that the buds, instead of opening, dropped off, and the crop for that year was lost. Had these been retarded by the same plan as Mr. Jennings adopts, the crop would have been saved.

There are here extensive forcing-houses, and they are well-managed. The day I was there, I saw a Vinery of ten rafters, each one having from fifteen to twenty bunches of ripe Grapes hanging upon it from the Vine. Ripe! Indeed, quite ripe; good bunches, good berries, and quite black, and only the third week in March. Not in pots, but on Vines planted inside, indeed, but the roots in the border outside. As the Americans say, I calculate this was considerably early. In the very next house the fruit of last year's growth had not been cut many weeks! There are considerable alterations and improvements going on here. Two ranges of houses are to be pulled down, and the site converted into pleasure ground; others are being rebuilt, and some repaired.

The last time I was here there was a good collection of Orchids, and there was also a splendid menagerie. The animals were collected by the late Earl of Derby, and the Orchids also. When the present Earl came into possession they were all disposed of, and the only remains is an extensive aviary, and a few Orchids in a small stove. The old Orchid-house is converted into a greenhouse filled with well-grown plants, forced *Rhododendrons*, *Kalmia latifolia*, and many *Acacias* in bloom. I noticed, more especially, a *Hardenbergia* trained up a pillar, with fine blue blossoms; it was named *H. Jarrattii*. I am sure any London nurseryman would think this a treasure.

In front of this greenhouse there is a long, narrow range of houses, occupied with Peaches, Nectarines, and Cherries, in large square boxes. The Cherry-house is 100 feet long; each was full of bloom. It must be a fine sight when the fruit is ripe. There are three Peach-houses, and the trees were all in fruit in three successions. In one house the fruit was just stoning; in the next, about the size of my thumb end; and in the third, just set. To produce such a succession there must have been great care and skill bestowed. Forcing is one of the triumphs of gardening art, and in no place is it better exhibited than at Knowesley.

Near to Mr. Jennings's new and excellent dwelling-house there is one of the most complete Mushroom-houses in the kingdom; that savoury esculent is grown here by bushels. The house is as clean, sweet, and pleasant as can be imagined. It is lighted with gas, so the vegetable can be seen at all hours, without letting in too much daylight. It is worth going many miles to see. It is spacious, lofty, well-paved, and well-lighted. A lady dressed in silks and satin slippers might promenade through it, without staining the one, or wetting the other.

Close to and adjoining the mansion there is a long conservatory in two divisions; one for greenhouse-plants, and the other for stove-plants. In the former is the *Luculia gratissima* I mentioned lately; also a good number of lofty, yet bushy, *Camellias* in full bloom. The end wall is brick, and it was covered with the finest specimens of the ancient *Kennedyia monophylla* that I ever saw. It had thousands of spikes of its beautiful blue flowers upon it.

On the rafters of the stove division there was a fine plant of *Begonia picta*, or, as some name it, *B. speciosa*. The plant was full of flowers, a rare circumstance. The flowers are large, and of a pleasing lilac-rosy colour, spotted with pink. It is a very desirable climber.

In walking from the gardens to the Hayton Station, on my way to Manchester, I saw avenues of young trees, such as *Coniferæ*, and also many Oaks. To protect these from cattle, they are enclosed in squares of posts and

rails. On the upper rail the name of each is painted legibly, and such large letters, that the names can be read from a carriage as it rolls along the smooth gravel road. I thought this a very good idea, instructive and amusing to the gay lady in her carriage, as well as to the, like myself, more humble pedestrian.

T. APPLEBY.

STYLIDIUMS.

(Continued from page 40.)

THERE are in this genus two divisions; the first contains a few species that are half shrubby and evergreen; the second consists of such as are herbaceous, and lose their leaves in winter. The latter are the most numerous. I have selected a few of the most desirable. They are all from New Holland.

GREENHOUSE EVERGREENS.

STYLIDIUM BRUNONIANUM (Dr. Brown's).—This pretty species, growing a foot high, is yet rare. It has rose-coloured flowers, appearing in June.

STYLIDIUM FASCICULATUM (Bundled).—This curious species produces several branches, and each branch sends forth again a close bundle of shoots, from each of which a spike of flowers proceeds. I know no plant like it. The flowers are produced in short spikes, are of a pink colour, and appear in August. A desirable plant.

STYLIDIUM FRUTICOSUM (Shrubby).—The stems of this species approach to woody, though it is a rather straggling plant, requiring good management to keep it in a tidy form. Grows a foot or more high, has pink flowers, appearing in July.

STYLIDIUM SCANDENS (Climbing).—This handsome species may be called a tiny climber, but it requires sticks and to be tied to them to keep it upright. It will, with this help, rise two feet high, with rose-coloured flowers in July.

GREENHOUSE HERBACEOUS.

STYLIDIUM ANDROSACEUM (Androsace-like).—This pretty, tiny plant does not rise more than two inches, forming a neat, small tuft, from which springs numerous spikes of white flowers in May; the petals are broad and flat, much more so than any other of the very small species. Very desirable.

STYLIDIUM CILIATUM (Fringed).—A May flower of a yellow colour, growing a foot high.

STYLIDIUM DRUMMONDI (Drummond's).—A tall-growing species, with pink flowers appearing in November.

STYLIDIUM GRAMINIFOLIUM (Grass-leaved).—When not in flower, this fine species might easily be mistaken for a patch of Thrift (*Statice*). The flower-stem rises two feet in height; the flowers are large, comparatively, are rather conspicuous, and of a pinkish-purple colour. It is the most easy to cultivate of all the genus, and I think the handsomest. The irritable power is also the most seen. It flowers in July.

STYLIDIUM RECURVUM (Curled-back).—One of the tiny gems of the genus, growing only three inches high, with deep reddish flowers. Very interesting.

STYLIDIUM SAXIFRAGOIDES (Saxifrage-like).—Very much like a small tuft of the rock Saxifrage; grows four inches high, with white flowers in June.

There are, at least, as many more species grown in this country, and still more in Australia; in fact, they are the weeds of that country. Travellers that do not understand plants, cull seeds of grand-looking, large-flowered trees in foreign countries, and send them home as treasures, forgetting that we cannot, or, at least, in a limited degree, find habitations for such large-growing

trees. An officer, fond of flowers, had spent several years in India, and being about to return home, collected a great lot of various seeds. He came to reside in St. John's Wood, Mary-le-bone, London, and visited Pine-Apple Place, and offered Messrs. Henderson any of the seeds he had brought home. I was sent up to his house to examine them, and to his great surprise, I told him ninety-nine out of a hundred were of no use in this country. They no doubt were fine things in an Indian climate, but we should require acres of glass as high as St. Paul's to grow them. What could we do with Baubinnias, Greivias, Spathodeas, and such-like trees, in Britain? He then despairingly enquired, What shall I collect when I return? I answered, Dwarf, showy shrubs, such as Ixoras, or even the mere weeds that had large flowers, highly coloured and sweet-scented; such we should be glad of, and could find space to grow them. I tried to tempt him to collect Orchids; but no, they grow in the jungles of India, and it is, he said, almost certain death to go into them when the Orchids are in bloom; but he would try to gather seeds of what they consider there as mere weeds. So it is in Australia. Persons unacquainted with what we already possess, or what is manageable here, send or bring over, in almost all cases, useless things. This is a little episode or digression, which I trust will be excused. It will be useful, perhaps, as a warning to some well-meaning but ignorant persons, who may visit foreign countries, and may prevent them much useless labour and waste of time in collecting seeds.

To return to those low-growing curious weeds of New Holland, the Stylidium.

CULTURE IN OUR GREENHOUSES.

PROPAGATION.—By Seeds.—The herbaceous species produce seed very frequently. Gather it as soon as it is ripe, and sow immediately in peat, loam, and sand in equal parts. Sow it in well-drained, shallow pans, very lightly covered with fine sifted soil; water sparingly, place them in a gentle heat, till the seedlings come up and have made some progress; then place the pans on a shelf near the glass in a good greenhouse till spring. As soon as the warm days return, pot them off into the smallest tiny pots, and place them in a cold frame, shading from the sun, and sheltering from the cold at night. They will require repotting during the summer, and will make nice plants the spring following, and some will flower.

By Cuttings.—The shrubby varieties should be increased by this method. In spring, take off young tops, trim off the lower leaves, insert them in sand in a gentle heat under a bell-glass, and sprinkle with water occasionally. They root quickly, and should then be potted off, kept close for a fortnight, and then treated like the old plants.

By Division.—All the herbaceous species may be increased by dividing them. Take a plant with several stems, turn it out of the pot, and gently shake part of the soil from it; then pass a sharp knife-blade just through the crown of the plant as many times as there are stems, then pull them gently asunder, pot each division under a small pot, and place them under a hand-light, either in a warm pit or propagating house, or even a shady part of the greenhouse. They will soon make fresh roots and new growths, and as soon as that is perceived, the hand-light should be lifted up to give air and dry up damps, and finally remove the glass off, and gradually inure the plants to bear full exposure. Then place them on a shelf near the glass in the greenhouse through the winter, giving small but frequent supplies of water to keep them alive.

GENERAL MANAGEMENT.

Soil.—I have used the following compost for these

plants with perfect success: light loam, sandy peat, and leaf-mould in equal parts, well mixed together with a liberal addition of silver sand, the whole passed through a sieve with middling-sized meshes.

Potting.—The proper time for this operation is in spring, just when the plants are beginning to make growth. As the greater part of the species are small growers, the pots should be in proportion in size; they will not thrive in large pots. Let the pots be quite clean and sweet. Drain well with small crocks, and when the potting is finished, place all the pots as near to the glass as convenient; they love plenty of light.

Watering.—This must be carefully given; too much is quite as injurious as too little. In dry weather the plants should be looked over every day. Evening, except in frosty weather, is the best time for watering. Use rain-water always, if possible, or water which has been exposed to the air for some days; wet the leaves as little as possible. By paying due attention to these points of culture, these curiously-interesting plants may be successfully cultivated.

T. APPLEBY.

THE TWO PRAYERS.

By the Authoress of "My Flowers."

SOME months ago, I was unusually delighted with a little circumstance introduced into an article in that very valuable and sound periodical, "The Churchman's Monthly Penny Magazine." It is so simply and beautifully told, the anecdote is so striking and affecting, and the subject so deeply important to all and each of us, that I cannot refrain from extracting it, and giving my readers the same pleasure I experienced, in the hope that to some it may be a "word in season," as well as an interesting fact.

"There was a good minister in Scotland, who used sometimes to travel about from place to place upon his little grey pony, and he made this rule for himself, that wherever he staid the night, he would, if possible, get the people of the house together for family prayers. One night he arrived rather late at a little country inn, and one of his first questions was to ask the landlord if he would allow him to assemble his family and lodgers for prayers, before they went to bed. The landlord made no objection, and the minister found quite a roomful when he went in to them. He expressed his pleasure in seeing them, and asked if all were there? 'All, sir,' said the landlord, 'except the little kitchen-maid, and she is too dirty and too ignorant to make one of us.' 'Ah, my friend,' said the clergyman earnestly, 'that poor girl has a soul to be saved, just as much as you or I have. Let me beg for her that she should come in to-night.' But the master did not seem to wish it, and the clergyman said no more till prayers were over, when he laid his hand upon the landlord's shoulder, 'I should like to say a word to that little girl, if you would kindly allow me to see her.' The landlord looked surprised, as if he thought he had rather a strange visitor in the house; however, he led the way to the back-place, where the little maid was very busy washing up her dishes.

"The clergyman began to talk to her, and found, indeed, that she was as ignorant as she was dirty. She did not seem to know or care anything about her soul. At last he said, 'I am going to teach you a little prayer, and if you will promise to learn it, and use it every morning and every night until I come again, I will bring you a smart new handkerchief from Edinburgh.' The girl's eyes brightened at this, and she promised. Then the minister said seriously, 'You will never care to be saved, until you know what danger you are in; and you will never know you are in danger, until you see how full of sin your heart is. I want you to ask God every day, 'Lord, show me myself!' It is a short prayer.' The girl repeated it after him, and promised to use it every day. The minister then went away and left her.

"The next time he came to the inn on his little grey pony, —it was some months after,—he asked the landlord, after he had enquired after the rest of his family, 'and pray how

is the little kitchen-maid, to whom I paid a visit when I was here last?" "Why, sir," was the answer, "to tell you the truth, she has been in a very poor way since you were here last. She has fretted herself quite ill. We don't know what to do with the girl at all." The minister asked to see her, and found the poor little maid on a bed of straw, in a little nook under the stairs. She was, indeed, pale and thin,—he would scarcely have known her again. When he asked what was the matter, she broke out afresh into tears,—“Oh! sir, I have scarcely known an easy moment since you were here last. I did pray God to show me myself, but I am ready to wish I never had. He has shown me the wickedness of my own heart, until I am a misery to myself. I think I am the worst sinner that ever lived; and where must I be going to when I die? To the bad place, I know and feel.” The minister tried to comfort her. He told her she had deserved to die, but Jesus, the Son of God, had died *instead* of her, and that if she looked to Jesus, she should be saved. The poor girl did not seem able to believe it. “I don't think He can love me,” she said. The good minister was not able to remain very long, but he said he would teach her another little prayer, which she must use also every day. It was this, “*Lord, show me Thyself!*”

“Many years passed on, and the good minister had never been able to go again to the inn of —, on his little grey pony. He had become too old for journeys, and remained chiefly at home. One day, his servant knocked at his door, and told him a stranger wished to see him. “Let her come in,” he said; and a respectable young woman came in, and dropped a curtsy. “You do not know me, sir!” “No, my friend, I do not; have I ever seen you before?” She replied by asking, “Do you remember, sir, being so kind as to teach two little prayers to the kitchen-maid, in the country inn of —?” The minister passed his hand over his forehead. “I remember,—oh yes, I remember all about it now; I was much interested in that child. Can you tell me anything about her?” “Sir,” said the young woman modestly, with tears in her eyes, “I am that little maid; I was in great trouble about my sins, when you saw me last, and you taught me to pray, ‘*Lord, show me Thyself!*’ I did, and the Lord heard me. Oh! sir, He showed me what a friend I have in Jesus, and how much He *must* have loved me to die upon the cross for me; and now I feel that I can never praise Him, and thank Him, and serve Him enough. The Lord has blessed me, too, in my place, and my work, so that I seem to have all I want; and I determined, if possible, to find you out, and thank you, for I feel I owe everything to you.”

Readers! need I say how much this simple tale struck me? Are there not many among us needing to be shown ourselves, and our God, fully as much as this poor, ignorant, dirty little maid? We need to be “sought out,” in our dirt and ignorance, our sins and deadness of heart, fully as much as she did; and I pray that some one, whose eye may fall upon this page, may be disturbed and troubled in mind as she was. We may be following our lawful callings; we may be doing “that which it is our duty to do;” but if we have never thought about our souls’ concerns, or seen what we are by nature; we are quite as unfit, yea, far more abundantly unfit, for the kingdom of Heaven, as she was for the company that met together in the inn.

Another thing. How important it is to be always busy in the Lord's service; to leave nothing undone, or unsaid, that comes in our path; for who can tell the amount of blessing conveyed by a few simple words?

Readers! you are divided into two classes. You are all either sitting in darkness, or partakers of Divine light. If you are yet in darkness, busy only with earthly things, let this good Scotch minister's visit to the little maid be his visit also to you. Learn “the two prayers,” and do not say them, but *offer them up* continually to Him who heareth and seeth in secret, and be well assured He will do the rest.

If you are partakers of Divine light, *let your light shine*. Speak boldly for God wherever you are — “Blessed is he that soweth beside all waters.” I know, by bitter experience, how injurious in its results half-heartedness and timidity are in spiritual things, and yet how difficult to overcome! Let us *all* offer up those “two prayers;” for the need to see more of ourselves, and more of God, increases with spiritual growth; so, whether we are yet in darkness or in light, let us remember the little Scottish maid.

THE APIARIAN'S CALENDAR.—MAY.

By J. H. Payne, Esq., Author of “*The Bee-Keeper's Guide,*” &c.

FEEDING.—Attention to feeding must still be given, for although the weather is now lovely (the middle of April), and the bees are bringing in an abundance of pollen, both from the Crowfoots, the Sallows, and the Elms, but most abundantly from the former, cold days may yet be expected, when no addition to their store can be made, and with an increasing population, unless food is supplied, famine must follow.

SWARMS.—Should we have, as Mr. Beaton has ventured to predict, a dry May, swarms may be expected at the end of the month, therefore, it will be good policy to have every arrangement for their reception made in good time; but June must be the month for honey. “None in June, none afterwards, depend on it.” The honey harvest comes on all at once, and very seldom lasts longer than a fortnight, so that additional room should be in readiness if required.

ENEMIES.—*Queen Wasps* are now showing themselves, and should be sought after and destroyed, both by gardeners and apiarians. If I mistake not, they will be very abundant this year, and very strong, for the unusual coldness of the spring has prevented their leaving their hiding-places until now. A few mild days in February usually tempts them out, when the cold which follows kills them, or renders them so feeble as to be easily captured, but now they come at once from their hiding-places to a temperature of sixty.

The *House Sparrow* may also be ranked amongst the enemies of bees, for I have observed, for the last four or five years, the female birds flying from the ground up to the mouth of the hive, and catching the bees just before, or as they take wing, and away with them to their young ones, when their nest is nigh the apiary. I have seen as many as six or eight journeys made in a quarter-of-an-hour by the female bird only. The male appears to take no part in it. I have never witnessed the like at any other time but when the birds have young to provide for, therefore, it would be well to have all the nests in the immediate neighbourhood of the apiary destroyed.

COTTAGER'S APIARY.—I have just visited the apiary of a cottager, and I was pleased to find that he had lost only seven stocks during the late trying season, and not one of them from neglect. He now numbers *twenty-five*, all in my improved cottage hives. It was quite delightful to see the vigour with which they were all carrying in pollen, and it was equally delightful, and even more so, to see the comfort, the cleanliness, and the good order which pervaded the cottage itself—A family loving their home, and striving to promote each other's comfort.

SUPERS.—By the middle of the month some hives that are forward will require a super; be careful not to give it until it is really required by the bees, which may be known by their crowded appearance, and the loud hum they keep up during the night. If put on too soon it retards the hatching of brood, by allowing a current of cold air to pass through the hive. It is better, if it can be so timed, that the super is given so that the bees will enter it immediately upon its being put on. Be it of wood, glass, or straw, a small piece of guide-comb is a great inducement to the bees to begin working in it at once.

CONIFERS, OR CONE-BEARING TREES.

DURING the last twenty or thirty years, a certain tribe of ornamental plants has attracted much more attention than was formerly bestowed upon it. I allude to that which is known to Botanists under the general name of CONIFERÆ, and popularly by the various names of *Pines, Firs, Cedars, Cypressess, &c.*, including also *Yews*. But I think that this tribe, though generally admired and appreciated, suffers a good deal from want of some plain guide to a knowledge of the various species. So many new kinds have lately been poured in upon us (and more may probably be expected) that people have not had time to *learn them*. With a view, therefore, to help on the knowledge and cultivation of them, I offer, under your approval, a few remarks on some of this

interesting tribe. The class of readers to which I address myself are those who are possessed neither of large means, nor a large extent of ground. Such may have seen, in nursery catalogues and advertisements, long lists of new Conifers freely offered, (for a mere cash consideration) to the public; and though desirous of selecting some for ornamenting their garden or shrubbery, may have been not a little perplexed by the multitude of choice.

In some catalogues which I have seen, several different species are each described as being the "most splendid," "most desirable," or "most magnificent" of the whole tribe: reminding one strongly of the brewer who inscribes his ale-casks of various qualities; the inferior quality as "best," the next as "better than the best," the next "best of all," and the next "better than that." As to which are really the finest and grandest of the whole tribe (confining ourselves to the *hardy* kinds) I will leave to others to settle, confessing, however, to a private prejudice in favour of the Californian species:—these, with *Wellingtonia* at their head, undoubtedly lead the van, quickly followed by the Chilian and other species. But most of the finest of these are yet too newly-introduced and too rare to be within the reach of the many (*seedlings* merely being charged from half-a-guinea to a guinea and upwards). I say, "*yet*," for why may we not hope that in course of time we may see those splendid Silver Firs, *Nobilis*, *Amabilis* and *Grandis*, with their brothers and cousins, adorning not only the mansion of the parson and the squire, but the homestead of the farmer and the pleasure-ground of the retired tradesman?

My chief object at present is to assist any one who wishes to cultivate a few select species in forming his choice. One of the first things which the prudent planter will consider, is whether any particular species which may have been brought under his notice is *really hardy* in this climate. In some nursery catalogues many of the newly-introduced species are broadly asserted (without any qualification) to be "*hardy*," which are indeed far from being so, some being actually tender (*i.e.* liable to be killed or seriously injured by spring frosts), and others requiring the care and management of a practised hand to rear them. Where the soil, situation and climate are suitable, many kinds are hardy, and will resist the effects of frost, which would not otherwise do so; but an amateur cannot be expected to hit off these matters exactly. The proper situations for all the different species few have had sufficient experience to determine; but without venturing on any hazardous experiments, there are a great many of the lately-introduced Firs which are not only ornamental and curious, but perfectly hardy, and at the same time within reach of persons of only moderate means. Some of the most prominent of these I now propose cursorily to describe, being such as can be recommended with perfect safety.

To begin with the Pines belonging to the group of which the *Scotch Fir* is the type:—among these we have the Corsican Pine (*Pinus Laricio*) with its varieties, the Austrian and Taurian Pines (*Austriaca* and *Pallasiana*). These are all vigorous and handsome trees, which will thrive in the bleakest situations. The Taurian Pine being especially adapted for chalky soils and barren sea-downs. Of the same section, but of much lower growth (averaging from ten to twenty feet) are *Pumilio* (sometimes called the Mountain Pine) and *Mugho*; these are, if possible, hardier than the last, and valuable as affording shelter on bleak hill-sides. The Cluster Pine (*P. Pinaster*) is well known; from its coarse character and scrambling mode of growth it would hardly be placed on any select list; but the cones so abundantly produced are very handsome. Its Latin name means "little Pine," so called from its lowness of growth; though in deep sandy soils it will attain as much as fifty or sixty feet in height. Of somewhat different aspect, but, probably, referable to the same group, is the Stone Pine of Italy, whose seeds are the *Pinocchi* of Italian deserts. In its young state this tree is sometimes found to be tender in our climate.

The Stone Pine of Switzerland and of Siberia (*P. Cembra*) belongs to a different section of the genus *Pinus*, and of which the Weymouth Pine (*P. Strobus*) may be taken as the best known type. It has been long introduced into this country, but it does not appear to have met with sufficient encouragement from planters.

Of this same section, (the *Strobus*-group) is another tree of beautiful character, and very hardy; the Royal Fir (or Weeping Fir) of the mountains of Nepal (*P. excelsa*):—this is now plentiful in the nurseries, (quoted by one firm at 4s. the dozen for nine to twelve-inch plants). Another of the same group is *P. Lambertiana*, from the Rocky Mountains in California: this is the loftiest of its genus, attaining to upwards of 200 feet high. There is a *Pinus* of another section (intermediate between that of the Scotch Fir and the Weymouth Pine) which nearly equals in height *P. Lambertiana*, called *P. Benthamiana*, and to the same section belong several other interesting but somewhat rare species:—*P. Sabiniana*, *P. macrocarpa*, and *P. insignis* from California; *P. Llaveana* (called the Mexican Cembra) and the Neoza Pine (*P. Gerardiana*) from the Himalayas.

The long-leaved Pines of Mexico, forming another natural group, of which there are many varieties, are either decidedly tender, or of a constitution too uncertain for the management of amateurs in this climate; the hardiest of them is *P. Montezumæ*. It would be easy to increase the list of trees belonging to this genus, which would form ornamental additions to the shrubbery; but to do so would most likely only weary and perplex the uninitiated reader. The genus *Abies* next claims our attention.—Mus.

(To be continued.)

THE BLACKS IN POULTRY.

IN this neighbourhood (Cheshire) the disease called "Blacks" has the following symptoms:—Black comb, &c., white tongue and throat, the skin unpleasantly hot to touch, while the fowl will, if possible, creep close to a fire, the birds becoming so light that they feel only like a bundle of feathers.

To effect a cure, mix strong flower of mustard and vinegar together, and with a small piece of sponge well wash the mouth, throat, and nostrils. Take four or five pieces of lump sugar, each about the size of a large pea, dip the sugar in sweet spirits of nitre, and put it down the throat of the diseased fowl. Sometimes this effects a cure, if not, the same dose is repeated on the third morning. We do not confine the birds, and are not well assured what occasions the disease.—F. E.

NOTES SUITABLE FOR A DRY SEASON.

TAKING care to have everything in its place at the proper time is one of the most important duties of the cultivator of the soil, and, in some respects, this duty should stand before that of making a good appearance; for though neatness and order will at all times set things off to the best advantage, these may be made subordinate to the getting in of the crops of the season when the proper time arrives; and as the present is one in which much progress takes place in all vegetation, it is important that everything should be in the ground at the proper time in order to commence its growth at the season most suitable for its doing well. For instance, no one can expect a good crop of *Onions* by sowing them in May, unless in some very remote late district, where the crop of this and many others is at all times hazardous; neither are *Potatoes* planted late to be depended on, although in some isolated cases they may succeed so. I have, for instance, had a good crop from a plantation made in July; but that was an exception to the general rule, and they were only planted to serve a certain purpose of having young *Potatoes* at a late period; but the general purposes of systematic cropping seldom require such a late plantation; but if they do, the forethought necessary to every cultivator ought to provide a place for them, as well as all others, at the proper time. But ground wanted for cropping in July ought not to lie idle so long, for many things might be planted and removed ere then; so that the skilful manager is at all times able to provide for the time to come, as well as to repair such mishaps as in the best arrangements, now and then, mar the onward working of the garden.

The setting in of dry weather, at this season, renders it still more advisable to hasten the planting of such things as have been unavoidably delayed, as well as the sowing of such seeds as are always wanted in late spring; for instance, *Rampion*, *Beet*, *Salsafy*, *Pickling Onions*, *Cape Brocoli*, and many other things may be done now which it was not necessary to sow early, but which it would be imprudent to keep later. If the weather threatens to become very dry, seeds do not vegetate well, and at the present time (April 14th) there is a probability of its becoming so; neither does watering have the same effect that moist weather has, for though, with care in shading, and other good management, seeds may be made to vegetate pretty well in dry weather, yet this cannot well be accomplished on a large scale. However, as it is important to have everything at its proper time, it is not bad practice to sow a little earlier when dry weather is likely to follow, and though none of us can with certainty foresee what may be the description of the weather for the time to come, yet those who have been in the habit of closely observing it for years past can give a tolerably shrewd guess what it may likely be, and I have heard more than one prophesy a dry spring. It, therefore, behoves us to be up and doing.

In settled dry weather, with a N. E. wind, the use of the watering-pot is in many instances deemed indispensable, yet it is not really so necessary as many imagine; while in many cases it does great harm. The most important thing is to retain what moisture there is in the ground, rather than to restore it by pouring deluges of cold, hard well-water upon it to be blistered in the sun; when, therefore, it becomes necessary to water, shade as well, and usually one good soaking will suffice. Many simple expedients may be adopted to break the direct rays of the sun acting on the plants, the most common, in country places, being to stick boughs over the ground, but netting doubled a few times, old calico, or any contrivance that may be at hand, will have the same effect, the purpose being to check the direct rays of the sun, and arrest undue evaporation. These objects being effected, the use of the watering-pot may be dispensed with in a great measure.

J. ROBSON.

GARDENING FOR THE MANY.

Our worthy correspondent, "Quis," having put us in mind that the list of flowering-plants we recommend as suitable to a small garden is deficient in annuals and biennials, we append a few of each; at the same time let it be fully understood that, as a class, the bulk of annual flowers are hardly suitable for the limited space of our worthy enquirer, although it cannot be denied that few or no descriptions of plants present so much bloom as they do when in their prime. But let us fancy such a plant as an *Eschscholtzia Californica* planted amongst humble-growing plants in a bed perhaps six feet in width. Now, this plant would usurp quite one-half of that, and though in sunshine they present a dazzling appearance, it shuts up early in the evening, and then has but a very shabby appearance. The same may be said of the *Convolvulus*; in fact, they collapse much sooner than the last-named. On the other hand, some are so short-lived that I should not like to recommend their being extensively planted; but at the same time some are very showy, and presenting good habits can be kept within proper bounds.

The following list of ANNUALS, though meagre, and, probably, not agreeing with everyones notion of such things is, nevertheless, likely to give satisfaction as far as it goes. I have selected them more for their utility than for their blaze of floral display, although they are not deficient in that either. I only mention twelve, which is as many as I grow myself, or nearly so.

Saponaria Calabrica
Mignonette
German Aster
Larkspur, of sorts
Nemophila insignis
Collinsia bicolor

Coreopsis tinctoria
Schizanthus pinnatus
Lobelia ramosa
African Marigold
French Marigold
German Stocks

BIENNIALS are far from a numerous class; at least, they are not so distinctly defined as to be always separated

from the two classes which bound them on both sides—annuals and perennials. Wallflowers, Stocks, Canterbury Bells, the pyramidal Campanula, and others, as well as some *Silenes*, and some plants in the Sweet William way; these are all well worth growing; the best dark, violet, and pure yellow Wallflowers being very useful, and every one admires Brompton Stocks.

Biennials need not be sown before May, except Wallflowers, which, if wanted large, might be sown before. They like a dry, stony situation, and I think I have seen them flourishing some eighty or one hundred feet high, upon a church steeple, along with Snapdragon, and some other plants, all self-sown, and clinging tenaciously to the crumbling stones. The single is much sweeter than the double, and flowers more freely. The pure yellow of both is the best, in my opinion; but the amateur fond of variety will, perhaps, cling to the extreme darks; but he will see them fade into a dingy brown after being out a few bright, hot, sunny days. Wallflowers make excellent rock plants, for their appearance is good in winter, except when, like the last, it has been unusually severe.

Having mentioned the bedding-plants as suitable for planting in mixed beds in a former article, I need not repeat it here; but may say, that the ordinary *Geraniums* do not do well after flowering in-doors; for having partly exhausted themselves that way, they generally take to growing, and furnish twigs for bouquets; but for that purpose they are inferior to some of the sweet-scented kinds, and not being suitable in foliage, the latter had better be planted in preference. Such kinds as *Rollison's Unique*, *Moore's Victory*, *Shrubland Pet*, and *Fair Helen*, might be planted with perfect propriety anywhere, as well as the dwarf Scarlet and variegated kinds. But I am digressing; nevertheless, I will return to this subject another time, as I intend planting *Geraniums* rather extensively the present season; but the amateur of small means had better only plant the cream of the lot, or rather those suiting his case; and I may add, that there are few *Calceolarias* but will do so.

J. ROBSON.

THE EARLY REMOVAL OF BAD EGGS FROM A SITTING HEN.

REMOVING the barren eggs from a sitting hen is practiced by some poultry breeders, with the idea of giving more room and greater warmth to those that remain.

When I set eggs from my own fowls, I seldom have recourse to the proceeding, but often find it advantageous with eggs that have travelled. Again, during cold weather, when broody hens are scarce, and chicken desirable, it will often be found advantageous to set two hens on the same day, and if on examining the eggs on the eighth or ninth day (at which time there is no risk of any mistake) many eggs are found barren, the good ones can be all given to one hen, and a fresh batch placed under the other.

The mode of examination which I think most desirable, is to take a lighted candle into the hen house after dark, and to hold up each egg in succession between the eye and the light, about two inches from the latter, when the eggs with chicken will be found perfectly opaque and dark; whereas those that are barren permit the light to pass through, and have much the appearance of being filled with melted wax.

I think the night by far the best time for this operation; the distinction is much better seen then than during the day time, and the broody hens are much quieter, and more easily managed.

The unfertile eggs thus removed will be found, if broken, quite free from any offensive odour; the white, however, is more liquid than usual. One very successful and well-known exhibitor, whose confined run renders animal food artificially supplied needful for his chicken, regularly examines his eggs in this manner, and boils those removed for the young broods. My own more extensive runs, and the liberal supply of small worms from the garden, render such a plan unnecessary in my own case.

I write this notice, not remembering to have seen any account of the operation in THE COTTAGE GARDENER. Let me, however, caution my readers against putting too many

eggs under a hen with the idea of removing the bad ones, as above described, a proceeding that would be quite certain to be followed by this result—there would be many bad ones to remove.—W. B. TEGETMEIER, *Wood Green, Tottenham.*

TREATMENT OF STRAGGLING AZALEAS.

IN a recent number of THE COTTAGE GARDENER appeared an enquiry as to the best mode of correcting a straggling habit of growth in the *Azalea indica*, to which a response was given, to shorten the branches by cutting them in. I have been expecting to notice a protest against this barbarous practice from the pen of some well-qualified grower of this beautiful plant, as it is well known that many varieties rarely recover from such amputations. Let the branches of the shrub be bent down and inwards by tying them to the stem, as is often practised in fruit-trees. Fresh shoots will then burst along the bend, which will flower well, especially if the compost used for growth be duly mixed with leaf-mould and sharp silver-sand.—O. B.

GAS HEATING.

THERE has been a good deal said of late about heating of greenhouses by gas, and I believe but few, if any, have succeeded satisfactorily. I have tried different methods during the last three years, but have not succeeded until now. I get none of the fumes of the gas in the house; I can have any degree of heat; and it costs me, on an average, 2½d. for twenty-four hours. I shall be very happy to shew it to Mr. Beaton, or any of the writers for THE COTTAGE GARDENER. If they will send me a note to say when they will call, I will have the heat on ready for them to see; as I might not have it in heat in the day, as I am only desirous of keeping frost out; and I have two contrivances for propagating (ideas of my own). Visitors may be pleased at seeing them at the same time. I am a cockney gardener, and an amateur, in the midst of London.—J. CRAGG, 8, Northampton-square, Clerkenwell, London.

STOPPING BLEEDING IN VINES.

IT may be of use to some of the numerous readers of THE COTTAGE GARDENER to know what will stop the bleeding of Vines.

Having myself shortened four Vines as late as February last, as soon as they began to break the extravasated sap began to flow freely from the wounds. I tried a mixture of white lead and clay; this did not do at all. I then looked into THE COTTAGE GARDENER for information. You recommend the enquirer to try twisting wire round the Vine so tight as to compress freely the bark. Not having any suitable wire at hand, I tried strong, small twine. This did not do. Thinking that Roman cement might do, I tried it, which had the desired effect.

It is necessary to apply the cement in a dry state, adding the powder from time to time, as the exuded sap moistens that previously applied, until the cement becomes hard, which it will be in the course of a day.—W. HALLIBY, Wakefield.

MESSRS. WEEKS AND CO'S. MODE OF HEATING.

THE statements made by Messrs. Weeks, in THE COTTAGE GARDENER, seem to me, as it appears they did to W. X W., quite astonishing; but without attempting to contradict them, I must say, it is a very great amount of water contained in 5000 feet of four-inch pipes to be heated. In the first place say, in round numbers, 2500 gallons, which, I believe, is not over the mark, and the extreme end of the pipe must necessarily be 5000 feet from the end of the boiler. In other words, the water in the pipes would have to circulate that distance before returning into the boiler again. How-

ever, admitting these facts, it appears Messrs. Weeks's boilers must be constructed on the very best principle possible; still, there is something I cannot exactly reconcile in their statements.

They say their boiler, although very little larger (which is rather an ambiguous term), than the boilers in use for heating the large Palm House, at Kew, exposes a surface of 340 feet superficial to the immediate action of the fire, when the boilers at Kew exposes a superficial surface of thirty feet only; but they do not say how that is accounted for. There must be a great error somewhere; either in the construction of the boilers at Kew, or in the setting them; and it would appear to be the latter; or how is it possible there could be such an amazing difference in the amount of surface exposed to the action of the fire in two boilers "nearly" of the same size?

I am inclined to think Messrs. Weeks's must be a tubular boiler, though they do not say so. In that case, to expose 340 superficial feet of surface to the immediate action of the fire, would require about 425 feet of tubes 2½ inches in diameter, or eight inches in circumference, or nearly so. How they are to be fixed, so as for all the surface to be exposed to the "immediate" action of the fire, I do not know.

The cost of fuel and labour, per day, for Messrs. Weeks's boiler is merely nominal, compared to what it does; but that must depend in a great measure on the price of coke, or whatever fuel is used in different localities. The quantity used per day is given—three sacks of coke, which I suppose could not be delivered under 1s. per sack; and as fuel and labour cost them 3s. 8d. per day, it would leave 8d. per day for a man's time, which certainly is not extravagant, even supposing it took him only one-third of his time to attend to the fires. The only inference to be drawn is, that fuel and labour are both very cheap in Chelsea.

But to sum up the whole:—as Messrs. Weeks endeavour to make it appear that their boilers are constructed so much superior to any other, how is it that Sir Joseph Paxton, and the other directors of the Crystal Palace Company, do not unhesitatingly adopt the plan where there were upwards of forty miles of pipes to be heated? It could be tested there to its fullest extent. I should say, if Messrs. Weeks were to fix one of their boilers in the Palace gratis, to show what it could do, it would answer their purpose.

I am only surprised at Sir Joseph overlooking so efficient and economical a mode of heating, when the Crystal Palace is yet unfinished, as I happen to know where a boiler was cast, and sent there only a few days since.—J. P.

A LIST OF PLANTS IN FLOWER DURING THE MONTH OF MARCH, 1855, IN THE ROYAL GARDENS AT KEW.

GREENHOUSES.

- Acacia dealbata*; bright deep yellow.
- " *rotundifolia*; fine bright yellow; free bloomer.
- " *urcinata*; yellow, broom-like foliage.
- " *suaveolens*; yellow.
- " *urophylla*; straw-colour.
- " *celastrifolia*; yellow, fine foliage.
- " *floribunda*; yellow.
- " *ovata*; yellow.
- " *smilacifolia*; straw-colour.
- " *undulatifolia*; yellow.
- " *biflora*; white.
- " *Drummondii*; beautiful light yellow.
- " *spes*; like *Drummondii*.
- " *asparegoides*; one mass of light yellow; a straw-colour feathery bloom.
- Azalea amena*; pretty pink; semi-double.
- Anopteris glandulosa*; spikes of white flowers, with fine laurel-like foliage.
- Camellia Colvilli*; Carnation striped.
- " *delicatissima*; white, slightly spotted with red.
- " *Duc de Brabant*; white ground with pink stripes; good-shaped flower.
- " *jubilee delicate*; pink with rose stripes; very fine-shaped flowers.

Camellia Leeana ; superb crimson.
 „ *corallina* ; scarlet, with blotches of white.
 „ *tricolor* ; white ground, pink stripes, and yellow
 stamens.
 „ *lacinea novissima* ; white.
 „ *double* ; white.
 „ *Sweetii*, Carnation-like.
 „ *Invincible* ; fine scarlet.
 „ *alba plena* ; pure white.
 „ *Emma* ; white.
 „ *picturata* ; white ground with pink stripes.
 „ *King* ; white, with rose stripes.
 „ *Juliana* ; white.
 „ *Gaussonia* ; light pink.
 „ *Monarch* ; bright scarlet-crimson.
 „ *Queen Victoria* ; pink ground with white stripes.
 „ *Fordii* delicate ; salmon-rose.
Banksia media ; fine orange cone-like flowers.
 „ *Cunninghami* ; dark brown and yellow.
Bauera rubioides ; pink.
Brachysema latifolium ; scarlet.
 „ *acuminatum* ; beautiful bright scarlet.
 „ *platyptera* ; scarlet.
 „ *undulatum* ; straw-colour.
Bossia cordifolia ; yellow.
Barosma dioica ; pretty pinkish white ; a mass of bloom.
Boronia Frazeri ; vermillion.
Cytisus filipes ; white.
Cyathodes oxycedrus ; white.
Chorozema flava ; yellow.
 „ *cordata* ; orange and pink.
 „ *elegans* ; orange and pink.
Correa pulchella ; bright scarlet.
 „ *ferruginia* ; yellow.
 „ *Stockwelliana* ; deep scarlet.
 „ *magnifica* ; light pink and brown.
Dryandra armata ; yellow and scarlet.
 „ *senecifolia* ; straw-colour.
Dracophyllum secundum ; white bell flowers like *Epacris*.
Epacris impressa recurvata ; pink.
 „ „ *densiflora incurvata* ; deep pink.
 „ *variabilis* ; pink and white.
 „ white seedling, very good, large bell-shaped
 flowers.
 „ *obtusifolia* ; pretty white upright flowers.
 „ *ardentissima* ; deep scarlet.
 „ *impressa longiflora alba* ; white.
 „ *bicolor* ; pink and white.
 „ *variabilis carnumbrata* ; light pink.
 „ *impressa coccinea major* ; light pink.
 „ *candidissima* ; white.
 „ *carnea longiflora* ; pink.
 „ *coccinea* ; scarlet.
Erica transperens ; light pink.
 „ *Petiveriana bicolor* ; yellow and pink.
 „ *speciosa* ; straw colour.
 „ *bicolor* ; scarlet and orange.
 „ *colorans superba* ; light pink and white.
 „ *Lambertiana rosea* ; transparent rosy-white.
 „ *cruenta* ; red.
 „ *rubra calyx* ; white.
 „ *brunioides* ; woolly-white.
 „ *vernalis* ; pink.
 „ *margaritacea* ; very small white flowers.
Eriostemon cuspidatum ; pinkish-white.
Enkianthus reticulatus ; light pink bell-shaped flowers.
Grevillea Baueri ; pink and green.
 „ *bipinnatifida* ; fine scarlet foliage.
 „ *linearis* ; pink.
 „ *rosmarinifolia* ; pink and green.
Gnidia imberbis ; light yellow.
Gnaphalium albescens ; white.
Hovea purpurea ; purple.
 „ *ferruginia* ; violet.
Hermannia alnifolia ; yellow.
Hardenbergia ovata ; violet.
Hakea spes ; white.
Lachenalia tricolor ; yellow and red.
Linum flavum ; yellow.
Mirbelia grandiflora ; yellow and brown.

Pimelia decussata ; deep pink.
 „ *incana* ; white.
Pultinea sub-umbellata ; orange and brown.
Pomaderris elliptica ; straw colour.
Polygala ligularis ; pink and white.
Raphiolepes salicifolia ; white.
Rhododendron Nilgariensum ; white, with purple edgings.
 „ *Aitoni* ; deep pink.
 „ *ciliatum* ; white.
 „ *arboreum* ; scarlet. A fine large specimen is
 here covered with blossom.
Selago distans ; pretty white and violet.
Tasmannia aromatica ; straw-colour, with yellow pistils ;
 very conspicuous.
Witsenia corymbosa ; sky blue.
Xanthosia rotundifolia ; white.
Zieria macrophylla ; white.

PLANTS IN FLOWER IN STOVE AND ORCHID HOUSES.

Achimenes picta : red and yellow striped lower petals.
Begonia ulmifolia : white.
 „ *sanguinea* : white flowers, scarlet underside of
 foliage.
 „ *depetala* : white.
 „ *auriculiformis* : flesh colour.
 „ *Fischeri* : white flowers ; pretty scarlet foliage.
 „ *dichotoma* : white flowers ; large green foliage.
 „ *lactevirens* : large, light rose-colour.
 „ *alba coccinea* : pretty, scarlet and white.
 „ *Mæhringi* : white flowers, pretty foliage.
 „ *nitida* : pink.
Bignonia Ingrami : pink and yellow.
Bilbergia amœna : lake colour.
 „ *iridifolia* : scarlet.
Caraguata lingulata : pink.
Franciscea Hopeana : white and violet.
Gesnera Merkii : beautiful bright scarlet tuber, very fine
 indeed.
Gloxinia Erugenia : pink with white throat.
 „ *argyronerva* : splendid deep blue with white
 throat.
 „ *papingham* : beautiful blue.
 „ *candidissima* : large ; pure white.
 „ *Victoria Regina* : light blue, with very dark blue
 lips.
 „ *Madame Chautin* : white and pink.
 „ *speciosa* : dark blue.
 „ *Marie Van Houtte* : flesh-colour, with scarlet
 throat ; very large and beautiful.
Hebectanum ianthemum : light pink.
Sinningia floribunda : violet.

AT MR. VEITCH'S EXOTIC NURSERY, CHELSEA.

GREENHOUSE PLANTS.

Azalea exquisita : pink with white edges.
 „ *Reddingi* : crimson-rose.
 „ *Perryana* : deep orange-scarlet.
 „ *refulgens* : deep crimson ; free bloomer.
 „ *eximia* : rose, very dark upper spots.
 „ *triumphans* : purplish-rose, upper petals thickly
 dotted with dark spots.
 „ *carnea superba* : fine, large, bright rose ; free
 bloomer ; good foliage.
 „ *Minerva* : scarlet.
 „ *alba illustrata* : white, with carmine stripes.
 „ *optima* : fine orange-scarlet.
 „ *mirabilis* : pink.
Camellia Woodsi : deep rose.
 „ *Futtany* : deep crimson.
 „ *Donkelaarii* : crimson, mottled with white.
 „ *Prince Albert* : carmine and blush-white striped.
Epacris campanulata rubra : red.
 „ *nivalis grandiflora* : white.
 „ *Hopeana* : pink ; free bloomer.
 „ *delicata* : pink and white.
 „ *fulgens* : bright scarlet.
 „ *hyacinthiflora* : fine rose.
 „ *Tauntoniensis* : deep crimson.
 „ *impressa* : deep pink.

- Epacris impressa alba*: white.
 „ *hyacinthiflora candidissima*: beautiful white.
 „ *sanguinea*: crimson.
 „ *Wilmoriana*: light pink.
 „ *coccinea floribunda*: brilliant scarlet.
 „ *lineata*: light pink.

IN STOVE AND ORCHID HOUSES.

- Ansellia Africana*: yellow ground, with brown spots, large trusses of blooms.
Angræcum eburnum: large, white flower.
Abrochynanthus pulchellus: white.
Crinum Asiaticum: white.
Conoclinium ianthemum: corymbs of fine blue flowers, with large, green, glaucous leaves.
Cyrtochilum maculatum: brown ground, with yellow spots, white and yellow lip.
Cypripedium barbatum superbum: the best variety.
 „ *villosum* (new): light brown; the upper petals edged with white.
Dendrobium nobile: light pink.
 „ *cærulescens*: darker variety.
Franciscea calycinea: large purple flowers with white eye.
Medinilla magnifica: large bunches of deep rose-coloured flowers, with fine, large, deep green foliage.
Oncidium pubes: bronze; free bloomer.
 „ *Cavendishi*: large, yellow.
Phalanopsis grandiflora: white.

HEATING A GREENHOUSE, PIT, AND ORCHARD-HOUSE.

OBSERVING, in a recent number of THE COTTAGE GARDENER, a question put by two of your correspondents, "A Constant Reader," and "L. W.," on the best mode of heating a greenhouse, and for growing Melons, Cucumbers, striking cuttings, &c., I beg to state, for their information, that I have a Greenhouse, Melon-pit, and Orchard-house, so arranged as to accomplish all these purposes. The following is a more detailed description:—1. A greenhouse sixteen feet long by twelve feet wide. 2. A pit of the same length, and six feet wide, for Melons and Cucumbers, and a portion of the bed for striking cuttings.

About ten feet from the end of the Melon-pit, in a direction parallel to it, I have—3. An Orchard-house for Peaches, Nectarines, Vines, Strawberries, &c. The whole heated by a small boiler, part of Pannell's heating apparatus,—a retort boiler he calls it. It heats as follows:—1st. A flow and return four-inch pipe along the front and each end of the Greenhouse; a single four-inch pipe all round the Melon-pit, for top-heat, and a cement tank under the bed for bottom-heat. The flow and return pipe which heats the tank can be shut off, and turned round the Orchard-house. I consider this a very good arrangement, and the whole is heated in a very effective manner.—J. S. LIEVRE, *Little Ashby Rectory*.

QUERIES AND ANSWERS.

GARDENING.

FOWLS—APRICOTS—WATER.

"My bees, managed according to Mr. Pain's plan, are very healthy and well. My fruit-trees, after Mr. Errington's treatment, do well. And my poultry—but respecting these useful birds my present inquiry is made. My object in keeping fowls is almost exclusively for the eggs, my preference being in favour of Cochin and Spanish; the former for winter, the latter for summer use. *Can I do better?* My stock at present consists of not more than fourteen or sixteen, all healthy and well. My business, that of a baker, furnishes an abundance and great variety of food, indeed more than I can keep fowls enough to consume. They have the entire run of a back yard, stable, &c., which is always vacant during the day, a large covered cart lodge, with

an uninterrupted communication to a wide and quiet street by means of a passage cut in the door; and I observe, that after rain, and early in fine mornings, they take very long walks, never meeting with any interruption. Their food is given them in the following way. I have a separate box for each kind, which box is long and shallow, with a stick fastened upon the top to prevent them dirtying it with their feet. These boxes are replenished each day, what is left from the preceding being always thrown to the dunghill. The sweepings of the bakehouse are carefully preserved, and with a little water mixed into shreds, as flour is used for making captain's biscuits; of this they are very fond; but I think my fowls are very dainty, preferring a variety, so they have the sweepings of the counter and shop, the grains from the yeast, and the refuse of the strainer, with an everlasting supply of fresh water, and whatever comes from the house, such as cabbage-leaves, tea-leaves, bones, &c. The fowl-house is kept very clean, and the yard also, every inch being paved. In winter they possess good quarters, roosting over the oven; but in summer time an airy and cool shed. Now, I want to know, *under these circumstances, how many fowls may I keep to advantage?*

"If an Apricot tree be so situated as to make it inconvenient to remove the canvass shelter when once placed over it, would it be attended with injurious effects if allowed to remain there? The one to which I refer grows upon a sort of trellis-work laid upon the tiles which covers the oven-house.

"Our town is well supplied with water from Artesian wells, which, after being subjected to Dr. Clarke's softening process by lime, is conveyed through iron pipes, and is very soft and pure. Is this good for plants?—EDWARD FAREBROTHER, *Woolwich*."

[Your *Apricots* would be tasteless, if they did not drop off before mature.

The *water* will not injure your plants.

Your selection of *Spanish* fowls as summer, and *Shanghaes* as winter layers is most judicious. But as you have not mentioned the size of your yard, it is not in our power to say Yes or No to the question of increasing your stock. As it appears, however, that you have no access to grass, limited numbers will be the best policy; for under your conditions, a small number of fowls may be kept with profit, where any overcrowding would be at once followed by disease.]

HOT-WATER PIPES SINKING BELOW THE LEVEL OF THE BOILER.

"I want to convey water from the house-boiler to a hot-house I am building, at a distance of about nine yards; the top of the boiler and tank being on a level. The flow and return-pipe from the boiler to the tank is to pass under the house floor; and the question is, would the water pass down, say two feet eight inches from the flow-pipe under the floor, circulate round the cemented tank, and return by the return-pipe under the floor, and rise to the boiler, two feet, to be again heated?—THOMAS HILL."

[We are not at all partial to heating by pipes under such circumstances; but we have had several instances of water so placed in pipes under walks, &c., answering very well. The water will always stand at its level, and the application of heat will cause it to circulate. To prevent the possibility of a little confined air collecting in the lowest part, insert a small pipe of quarter-of-an-inch bore there, in each hot-water pipe, and let these small pipes rise higher than the level of the water in the tank or boiler. These are not absolutely necessary, and yet they would prevent some mischances. It seldom answers well to have any of the pipes lower than the boiler. If your hothouse is not very small, it would be better to have a boiler for it by itself. Would it be impracticable to convey the water in one-inch lead pipes above the floor? If you resolve upon the plan, try how it succeeds before you replace the floor. Just on the principle of water finding its level, and ever discharging itself by means of a syphon, we have several times seen pipes dip several feet without any detriment, provided there was an open pipe attached to them; but when much lower than the boiler, interruptions were apt to occur.]

CULTURE OF ROSES IN POTS.

"I am exceedingly fond of Roses, but find that my knowledge of their culture is small indeed. I have several in pots, both standards and raised from cuttings. They have been in the greenhouse all the winter, have made *much* wood, and are now looking as healthy as one could wish. With one or two exceptions, I have not had a bloom, or sign of one, upon them. Will you kindly give me a hint as to their future culture, especially upon the points when and how are they to be pruned? and at what time placed in the greenhouse in order to insure, as far as possible, *early* blooming?—A CONSTANT SUBSCRIBER."

[The best way is to keep the Roses in the greenhouse till the end of May, and not to touch them by the knife or finger till towards the end of September. After getting them out of the greenhouse, let the pots be plunged to the *rim*s, not over the rims, in a warm, sheltered place, and see to the watering in dry weather. Prune them at the end of September, on the close system; that is, all the young wood to be cut to one, three, or four eyes from the old wood, according to their strength; the weakest to be the shortest cut. Towards the end of November examine the pots, and if you find the roots are good and plentiful, let the plants remain as they are, and remove them to a cool frame, and in January to the greenhouse, and they will be sure to flower well. If you find the roots are bad, the best way is to shake off the whole of the soil, and repot them, then frame them, and do not take them to the greenhouse before February. No pot Roses will flower well if they were not well-grown the year before.]

GRAFTING ROSES IN A HOTBED.

"May I ask the favour of your giving me, in the columns of your magazine, some instruction in grafting Roses? I have some *Manetti* stocks in pots, and some Roses from which I could take grafts. I suppose the stock and graft should be in the same state of growth; but should the stock be headed down to the graft immediately the graft is put on, or should a few buds of the stock remain to draw the sap up? I have a hotbed and frame, in which I could forward the plants after grafting.—H."

[Grafting Roses in a hotbed is one of the very simplest of operations in the hands of a general propagator. The way he would proceed is this: At this, and after this season, to next September, he would take his grafts from young shoots that are about ripening, or not more than half ripe, as he could get them; he would reduce them to three joints in lengths, or to two joints, if the joints were far apart; he would cut square under a bud as for a cutting, and on the opposite side from this bottom eye he would make a down cut, leaving the bottom of the graft in the form of a *blunt wedge*; then he would take his *Manetti* pot and lie it down on the bench, with the bottom end next to himself; then he would make a *down cut* on the stem of the *Manetti* as long as the cut on the graft, or say a little more than an inch; and this cut he would make *square at bottom* by a cross cut, then the blunt edge of the graft would rest on the square cut, and the two barks would meet, at least on one side of the cut parts, and that would do; he would then bind them, and, last of all, he would clay them in this fashion: he would put a piece of clay as big as an egg into a small pot, and press it down, then put a little water over it, and *work* it with a little mat brush, as Mr. Mechi would a soap-box for shaving, till the clay lather was thicker than cream; with the same brush he lathers the grafted parts all round, and to keep the lather from cracking when it gets dry, he dredges it with dry sand; this forms a crust, which will hold good till all the grafts are taken. He then puts them all into the frame, and with a piece of newspaper over them to keep the sun from them for the first ten days, and he would expect every one of them to grow.

When they do grafting in pots and frames they never tongue or slit the graft or stock as they do out in the ground with Apples and all other trees.]

HYBRIDIZING PELARGONIUMS.

"I had a fair collection of Pelargoniums last autumn, but by an accident I have lost them all. I am desirous of replacing them by about a dozen-and-a-half or two dozen *very* good but not *very* expensive ones—say under 5s. a plant. I have great pleasure in hybridizing and raising seedlings, and have gleaned all my information from the columns of your journal. May I beg you to name a list of such as would afford the greatest contrast, and the best hopes of success, with such an end in view? I allude to the large sorts, and not to the small fancies, unless you will kindly offer me the suggestion of any others.—A CONSTANT READER."

[We must answer your second question first, in order to state our regret at not being yet initiated in the details of crossing Pelargoniums. All that we and you require is to know the kinds which do and do not produce pollen, also, that will and will not bear seeds; and also, to save time, to know the kinds which never produce a good cross. We possess all this knowledge with respect to the other sections of Geraniums; but we do not happen to know a single individual who would be likely to give us what you and we require. Florists make a secret of such things in one generation, and the next generation suffer for this short-sightedness, because, whenever there is any secrecy about a set of flowers, the public taste for such flowers flags sooner or later. Therefore, the best list we can offer under the circumstances is that at page 401 of our twelfth volume, and most of them should now be had for the price you are willing to give. But your best course will be to send that list to a respectable dealer, and ask him at what price he can supply them, and if he cannot, he will be able to tell you of others of the same stamp which will suit you just as well; for there is no end to really good Pelargoniums, as they call these new Geraniums.]

ORCHARDING.

In continuation of CLERICUS's queries we proceed with—

"6. Would it not be worth the expense to protect *Peaches*, *French Pears*, *Apricots*, &c., on walls, by screens, having the lower part made of canvass, and the higher of glass, beginning to cover in December, and leaving them through April and May, taking care to lift them for proper airing at proper times? Would not such treatment be the means of insuring, as a general rule, fair crops?"

[No doubt such protection is very desirable when applied at the proper time; but it would be not only unnecessary but injurious to begin in December. At that season, and for long afterwards, the buds are far more securely protected by nature than they could be by any artificial appliances; and protection, such as you speak of, at such a period, would cause an unseasonable development. The time to apply protection is when the flower-buds are being developed naturally, and when you have reason to apprehend injury from frosty nights, and cold cutting winds.]

"7. When a *Greenhouse* or *Orchard-house*, costing £50, was properly-filled with *Peaches*, *Vines*, &c., in fair bearing, what would be the commercial value of the produce per year?"

[This is rather a difficult question to answer; so much depends on circumstances, of which quality and supply are the most important. If you can get your *Peaches* ready for market by the first week in June, you may get from 12s. to 24s. a dozen for them; but if you cannot produce them before September they will not be worth more than 6s. to 8s.]

"8. Are greenhouses in the midland and northern counties much later than the greenhouses of the south?"—[No.]

"9. Are *Peaches*, *Pears*, *Cherries*, *Strawberries*, &c., grown in greenhouses, as good in flavour as those grown on walls?"

[Not generally. *Pears* are very much inferior.]

"10. *Peaches*, *Nectarines*, and *Apricots*, cannot be grown as espaliers without a wall?"—[No.]

[11. *Filberts* are a profitable fruit to grow in an orchard,

when properly managed; but if allowed to run wild, as they generally are, except in the Kentish orchards, they are not profitable.

12. To ascertain the *most profitable kinds of fruit* to grow for the markets you intend to supply, you had better apply to some fruiterer in either of those places, and when you have ascertained what kinds are most in demand, we can tell you the best varieties to grow of each kind.

13. We have seen 3000 imperial pints of *Strawberries* gathered from an imperial acre, consisting of *Keene's Seedling*, *Goliath*, and *Elton*.

14. The pit you speak of for *forcing the Strawberry* would answer well.

15. *Vines*, *Peaches*, and *Cherries*, and even *Lemons* and *Oranges*, can be ripened in houses without fire-heat.

16. We should say the back wall to a lean-to greenhouse could be more cheaply built of wood than of brick.]

DISTANCES BETWEEN BEDDING-OUT PLANTS.

"You will oblige me by telling me (in THE COTTAGE GARDENER) the distances apart to plant my bedding-out plants, so as to make the best show.

"They are *Geraniums*, as *Punch* and *Tom Thumb*; *Calceolaria Kayii*; *Verbenas*, *Emma*, *Triumph*, *Defiance*, *Mont Blanc*, &c.; *Lobelia Erinus*; *Petunias*, as *Crimson King*, &c.—TERBLA."

[The distances between bedding-plants, at the time of "planting out," are regulated entirely by the size of the plants; but sometimes the rule of "cutting according to your cloth" is applied. When one is "full handed," the plants are set closer, and the contrary when the stock is short. As a general rule, take the following:—Plant young *Tom Thumbs* not more than four inches from the outside of the bed, nor more than four or five inches apart from one another; not from centre to centre, however, but from the outside of one plant to the outside of the one next to it. Six inches of open space between the leaves of two plants of any kind of *Geranium* would be thin planting; but eight inches would not be too much, in the long run, provided a supply of temporary plants was furnished for the open intervals. Annuals are thus used by some of our planters. *Petunias* are trained down on the ground as soon as they are planted; they and the *Verbenas* are planted "heads and tails," or trained so; but some planters choose rather to place the heads of all *trailing plants* towards the north, to compensate for the attraction of the sun, so to speak, to draw the plants to the south; four inches is the space left between the stems of *Petunias* and *Verbenas*; *Calceolarias* much about the same, but not wider apart; but the *best* way is to leave as little space as possible between any of the bedding-plants, so that the beds may look well-furnished at once. Either way, the size of the individual plants must determine the exact distances. All the upright *Lobelias*, such as *Erinus*, ought to be planted close; but the "running" ones, as *Gracilis*, may stand six inches apart.]

CALIFORNIAN WOOL AND BUTTER.

WOOL-GROWING.—We have repeatedly asserted that California will become one of the wool-growing States. Everything favours it; climate, pasturage, season, rapid increase, and little care or cost, all give the assurance of good success. Already the efforts have been particularly successful. The San Joaquin valley has already 150,000 sheep, and the number will soon be doubled by those on the way. Heavy lots of wool have been received in this city for shipment to the States; more than 200,000 lbs. have gone, and more will soon follow. There is no doubt but that in a little time California will take a prominent part in wool-growing, adding largely to the wealth of the State.

DOMESTIC INDUSTRY OF CALIFORNIA.—We learn, that at the famous ranch of C. J. Hutchinson, Esq., on the Putah Creek, one thousand pounds of butter are made monthly. D. W. C. Thompson, Esq., at Sonoma, sends down five hundred pounds monthly. There are many valuable dairies at

Petaluma, Napa, Sonora, Santa Clara, San Jose, and other places. The aggregate manufacture of butter and cheese would surprise any one: it is, however, of sufficient quantity to give assurance that we shall soon be independent of foreign importation.—*Cal. Farmer*.

TO CORRESPONDENTS.

MANY Questions must remain unanswered until next week, the information required not having reached us.

CONIFERS (*Mus*).—By all means do as you wish.

GUANO (*Stoke Newington*).—See what the London Manure Company, 40, Bridge Street, Blackfriars, can do for you.

BEES (*J. King*).—They are robbing each other. The only chance of putting an end to the pillage is for one party to move his bees at night to some distant place for a few weeks.

WARDIAN CASE (*Amateur*).—You will find a list of plants for its roof in our No. 265, and for the bottom, there is a list in No. 234. No plants but Ferns and Lycopods do well in such cases.

COCHIN HEN (*T. Williams*).—Your moping hen, with the "twitching of the head," and laying an egg "streaked with blood," has partial paralysis, brought on, probably, by unwholesome feeding in a confined space. Give her soft food, plenty of green food, and no animal food. Give her also a five grain pill of jalap.

DRYING PLANTS (*A Subscriber*).—We recently gave directions for doing this. We never heard of the "Cyclopædia" you mention.

HENS EATING EGGS (*W. S. E.*).—There is no mode of preventing this, except watching the laying hen, and taking the egg as soon as laid.

INDEX FILICUM (*S. H. J.*).—This synopsis of the genera of Ferns, with their characters, species, synonymes, &c., is preparing by Mr. Moore, and will be published by Mr. Pamplin probably in the course of the summer.

DORKING FOWLS (*T. V. W.*).—They will not thrive "in a confined space," and no feeding or management will keep them healthy there. The "Gresford Yews" are noticed in our No. 325.

BREEDING PIGEONS (*J. B. Burt*).—Pigeons ultimately suffer from degeneracy consequent on continuous breeding in and in, but not so rapidly as fowls under similar circumstances.

NAMES OF PEARS (*R. H. Gill*).—The green, oval, russety Pear is a small specimen of the *Easter Beurre*. The other was too much decayed to be recognised.

POULTRY SHOWS.

AGRICULTURAL SOCIETY'S (Royal) at Carlisle. July 23rd, and following days. Secs., J. Hudson, Esq., Hanover Square, London.

AIREDALE, at Shipley, 14th of August. Secs., J. Wilkinson, Esq., and J. G. Hyslop, Esq.

BATH AND WEST OF ENGLAND, at Tiverton, 6th, 7th, and 8th of June. Secs., J. Kingsbury, Esq., Hammet Street, Taunton.

BEDFORD. November. Secs., J. T. R. Allen, Esq., and F. A. Lavender, Esq.

BIRMINGHAM. 11th to 14th of December. Secs., J. Morgan, jun., Esq.

DEWSBURY. 24th August. Secs., R. R. Nelson, Esq., and J. Newcome, Esq.

DORCHESTER. 24th and 25th of October. Secs., J. G. Andrews, Esq.

DURHAM AND NORTH YORKSHIRE, at Darlington, 6th and 7th of December. Secs., J. Hodgson, Esq.

HEXHAM. 14th and 15th of May. Secs., Mr. W. Turner, Hexham, and Mr. J. Bell, High Shield.

NOTTINGHAMSHIRE, at Southwell, 19th and 20th of December. Secs., R. Hawksley, jun., Esq., Southwell.


PARIS. June 1st to 9th. Application to be made to the Minister of Agriculture.

WINDSOR. 27th, 28th, and 29th of June. Secs., T. Chamberlain, Esq., and H. Thompson, Esq., Thames Street, Windsor.

N.B.—Secretaries will oblige us by sending early copies of their lists.

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WEEKLY CALENDAR.

D M	D W	MAY 8—14, 1855.	WEATHER NEAR LONDON IN 1853.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in Inches.						
8	TU	Gyrinus villosus.	29.558—29.448	58—32	S.W.	62	22 a 4	31 a 7	1 49	22	3 41	128
9	W	Elater tessellatus.	29.861—29.676	60—31	N.	17	20	32	2 16		3 45	129
10	TH	Elater balteatus.	30.039—29.992	58—41	N.E.	—	18	34	2 37	24	3 48	130
11	F	Elater niger.	30.075—29.939	56—30	W.	—	17	36	2 53	25	3 50	131
12	S	Elater æneus.	30.186—30.118	67—39	S.	—	15	37	3 8	26	3 52	132
13	SUN	ROGATION SUNDAY.	30.110—30.083	67—37	N.W.	—	14	39	3 21	27	3 53	133
14	M	Elater lineatus.	30.139—30.112	67—37	N.E.	—	12	40	3 36	28	3 54	134

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 62.°6, and 40.7°, respectively. The greatest heat, 81°, occurred on the 12th, in 1833; and the lowest cold, 25°, on the 11th, in 1838. During the period 117 days were fine, and on 79 rain fell.

Nor long since an American lady was asked, “What has woman to do with agriculture?” and in reply she related this anecdote:—

“I know a woman who, twelve years ago, was left a widow, with six small children, in debt, upon a farm of one hundred acres, fifty improved and indifferently cultivated. The fact enforced itself upon her mind that she had something to do with agriculture, and although she was as ignorant as farmers’ wives generally, she went to work industriously to inform herself; for upon her efforts and her success depended the education it had always been her ambition to give her children. Her success was undoubted; and now she will tell you, if you ask her, what crops are most exhausting, and which least injurious to land; she will explain the course necessary to be pursued to elevate the standard of fertility; will tell you how she made her dairy profitable, and why she finally exchanged her cows for sheep. I know several other instances where families similarly circumstanced have been broken up and scattered, because the mother could not attend to the farm. If our own interest, and the interest of our children is not inducement enough for us to inform ourselves upon this matter, then the ambition to become sensible companions for our husbands, and intelligent mothers for our sons, should be enough to induce farmers’ wives and daughters to learn something respecting the principles of agriculture.”

Can any one either by reason or ridicule make us feel that this reply is absurd? Can any one convince us that a knowledge of the culture of the soil is incompatible with those other acquirements which render woman the support as well as the adornment of a household? Happily, we know many instances to the contrary, and we are well pleased to quote as an example the Leicestershire Lady, whose little pamphlet is now before us.* The dedication reveals its authorship, for it pages are “Inscribed by a mother to her son, with a hope that they may be the means of turning his attention to the pursuits of agriculture, and may lead him by observation and practical experience to forward that science, upon which the welfare of society so much depends.” The writer, however, has another object; for she thinks her pages are likely to be useful to the beginner, “who feeling anxious to cultivate a few acres of land, may be glad of some general rules on first entering

* *Hints on Agriculture adapted to a Midland County.* Price sixpence. London: Hamilton, Adams, and Co., Paternoster Row.

upon one of the most praiseworthy and enjoyable pursuits a person can adopt—

“To study culture, and with artful toil
To meliorate and tame the stubborn soil,
To give dissimilar yet fruitful lands
The grain, or herb, or plant that each demands.
This, this is art pursued without a crime,
That leaves no stain upon the wing of time.”

We assent to all this—not only to the worthiness of the pursuit, but to the opinion that all ladies living in the country, and all beginners of the art of soil-culture, whether allotment holders, or tenants of wider spaces, may read the Lady of Leicestershire’s “Hints” with much advantage. We include ladies resident in the country within those who may read the “Hints” with advantage, because it will increase the pleasures derivable from their rambles if they understand the proper why, and when, and how of what is doing daily around them. Let no lady say, “Oh, I know quite enough of such matters,” for we fear that very few know even the simple facts contained in this short extract.

BARLEY.

“Barley requires the land to be in a highly pulverized state, which should be ploughed if possible before Christmas, so as to have the benefit of the frost upon it. It will not require manuring, as I suppose the ground has been well manured for the previous crop of turnips. March and April are the months for sowing this crop. I advise three bushels per acre to be drilled, you are thus enabled to hoe between the rows and keep the land clean. The clover seed is sown broadcast after the barley; the quantity per acre will be 10 lbs. of red clover, 2 lbs. of white, and 2 lbs. of trefoil mixed together. If you find in the Autumn the clover seed has come up thick, and promises a good crop, you may turn the sheep upon it to eat it down, provided the weather is not frosty, but it must not be too closely cropped under any circumstances. The clover crop will be fit to cut and make into hay about the following June. When it has sprung up a second time and become a good crop, mow it or turn the sheep upon it to eat it well down, preparatory to its being ploughed up for the wheat crop in October. Barley is not injured like Oats in being allowed to be dead ripe before it is cut, and may be mowed, the corn not shelling. Barley should weigh 16 stone net per sack.”

Let any one lady who does possess such knowledge take our word for it that she possesses a store of useful information, which it would be well if all her sisterhood possessed. We have given some reasons shewing why it is desirable for them, and, besides, who among them can tell whether she may not one day find herself in an emigrant household? Then will she find the full value of such knowledge, and be able to write to dear ones in the old country such a letter as that now open before us. It is from Australia, and from one who has shone in

many a brilliant Scottish circle. The extract will say all we need—

“James (her husband) has been away more than a week to help Anne,* at M——, for she cannot get on this seed time without his advice and assistance. James is able to do this, because I know enough of farming to see that all is done right whilst he is away.”

ON the 1st instant was held, as usual, the Anniversary Meeting of the London Horticultural Society, and we regret to find, from statements then made, that it is in a situation, as to its finances, still worse than in previous years. The excess of last year's expenditure over its income was stated to be about £1200. A hope was expressed by one of the officials that the present year would be more propitious for out-door exhibitions, and that, consequently, the receipts from that source would be larger to the Society than last year. Surely the leading Horticultural Society of the kingdom, in a climate so uncertain, should not be dependant for its solvency upon its flower shows. Why not put it under more popular management? Why not increase its members by reducing the annual payment? Why not render it more useful? If efforts are not made at once, practically answering these suggestive queries, this Society, so capable of good, will be irretrievably involved.

At present the management of the Society rests upon one gentleman, who happens to be of unconciliating manners to those under him, and for that and other reasons is very unpopular with practical gardeners, who would strive to aid the Society, and to influence their employers to do the same, if it were under a more agreeable manager. The Society is singularly unfortunate with respect to its chief managing officer. Mr. Sabine loaded it with debt, and the present gentleman has rendered it unpopular.

These adverse circumstances, combined with three or four exhibitions annually at the Crystal Palace, and the greater facility for access to the Botanic Garden in the Regent's Park, sooner or later will render it necessary to close the Horticultural Society altogether. The members, therefore, will not be displeased to hear that the Society's property, including its library, have been valued by Mr. Stevens the auctioneer, Mr. Bohn the bookseller and publisher, and Mr. Glendinning, of Chiswick Nursery, and estimated by them at £24,000. This, after making every allowance for the difference between valuation and selling prices, will fully cover the Society's present debts.

FROSTS IN MAY.—HARDY FLOWER-GARDENING OF THE MONTH.

THE 10th day of May will ever be a memorable day in my gardening calendar, as being the starting point of the summer campaign, in each successive year;

* Anne is a widow, with three children.

planting, sowing, change of quarters, and colonising *in the open air*, were among the details which were, or should be ready for execution by the 10th of May. But let me enlarge on each head in its turn, before giving the reason for being so particular about a certain day. If frost did not happen from the 6th to the 9th of May, no more frost need be expected till after the 17th, if any at all that season. Perhaps it may be found, in the journals of the weather, that no frost had occurred on the 10th of May since they were kept. Gardeners expect frost on the 3rd, 7th, or 9th of May, if the weather is at all likely for frost, as it is this season; but I never yet knew a gardener who dreaded frost on the night of the 10th of May; yet, strange as it may appear, I do not think that this had anything to do with the resolution of doing so and so on that day. To be a successful gardener, requires the head to be at least six months in advance of the hands; sometimes, indeed, as much as twelve months before them, when the head allows twelve months for the year; but the more usual year of the best gardeners has only eleven months; that is, from the 10th of April to the 10th of May being a dead blank and the head at its “wit's end.” During this dead blank there are no pots to spare, no room, no pit, no frame or lights, no nothing, that can be stretched one inch farther; the whole, from the strongest nerve, to the last mat over the hooped bed, are at full tension for a full month.

At the end of the blank, or tension month, the oldest *Calceolarias*, from the reserves, may be planted out into flower-beds which are well sheltered from the east wind, or be removed into open sheltered places, with no more protection at night till they are bedded-out; so that the “planting-out” season dates from the 10th of May; from that date, empty pots, which would have been a god-send the week before, if only for colonising, will come in faster than one can use them, till at last they become troublesome.

TREATMENT OF SEEDLINGS.

After the 10th of May, colonising will be done better without pots altogether in the open ground, where the colonists can be sheltered and shaded for a while. One of the most pressing strains during the tension week was from the fact of our having had ten times more seedlings in pots than we could find pots for “potting off,” or room for the extra pots, if we had them. This being a universal fix, led to that mode of transplanting seedlings, termed colonising. To save pots and pot room, you take a pot of seedlings, *Dianthus superbus*, for instance, and as they are now so thick that a few more days will spoil them, potting them “off,” even in colonies, must very much relieve them, if not save them from certain ruin; therefore, colonising, or transplanting seedlings in little patches, and every patch containing from four to ten seedlings was adopted. This way of transplanting, though not a good way in general, is about the best way, in particular instances, when you get into a fix during the tension month, or after, or before that time, when seedlings happen to get too much grown and crowded in the seed-pot. I find that about 19,700 little pots brimfull of Balsams, are, or were, within the influence of THE COTTAGE GARDENER whilst I am writing; that to pot them singly would not be the best way to relieve them just yet, but that each pot would make six nice colonies, if the ball was carefully divided into so many parts, and each part to be put into a separate pot, and just one half-inch deeper than before; because, when Balsams come up thus crowded they are sure to be long in the legs. Look, again, to the pots of *Lobelia racemosa*, and others of them, as thick as grass; who can count them, or, rather, who can pot them off singly? Who, indeed! The thing is altogether out of the question; they

must be colonised, and so must every pot of seedlings which is full and pressing at the end of the tension month; but some, or the greatest part for the flower-beds will do to be colonised out-of-doors, or in cold pits without pots.

I spent a few hours, the other day, with a colonial "Governor," who very much approved of this way of treating young colonists, and who wondered that this system of colonisation was not enforced by the laws of the country; but when we bring to mind that it was not till very recently that the proper way of dealing with an "overplus" of seedlings, in either kingdom or nature, was understood by the authorities, we can well account for these "wonderments" at the new order of settlements.

A shaded place is not the best place for putting out seedlings at this season, whether they be singly, or in little patches; perhaps a west aspect would be the best, if the place can be shaded in the afternoon with boughs, or anything else, for the first week; full south is too glaring for them, and less sheltered from the cold east wind, than under a west wall, bank, or hedge, and, like the goose and the gander, what is good for seedlings is equally good for old plants turned out for a while. Thus, so far relieved, by planting out the hardiest, by colonising, and by economy of space, we have time to look a-head, the distance of six months first, and to the end of next April after that. The "book" shows, at one glance, when such and such places in the garden are likely to "wear off," and to become blanks, and the *succession crop*.

SUCCESSION SOWINGS.

What a world of anxiety is expressed in these two words—"succession crop!" The 10th of May ushers in a new order of sowings, to be in readiness all next autumn, and to come to our relief by this time next year. "The flowers of our childhood" have touched a chord, the most impulsive and sensitive of our nature, and it must and will be responded to, on or soon after the 10th of May, in sowings, and sowings, and sowings, till every border of a shrubbery, and all along the walks, are brimfull of spring flowers for "May-day." But the first sowing on the 10th of May must be of *China Asters*, the second and the final crop for this season, unless, indeed, we should have a dry time of it after the middle of August; in that case, the *Asters* from the first May sowing will be too apt to run out before the frost comes; to guard against such a misfortune, another sowing on the 25th of May is always made by the wisest; if the plants from this late sowing are not wanted, good and well, but if they are, who can count their value! The *Asters* from the last May sowing are planted six inches apart every way, in the kitchen or reserve garden, and are in full bloom before they are wanted, then, if the expected frost on the 10th of October comes, the *Heliotropes* are gone, and many more besides, and the *Asters*, in bloom, are just ready at hand, to fill up such beds as are seen from the windows. To many of the old gardeners it is almost a fixed law, that if we escape the frost during the second week in October, we have a chance of seven to one that the next month or five weeks will not hurt these *Asters*, or much else, which escape the said early frost; hence, the argument for such late sowings as that on the 25th of May. The recollections, not of our childhood, but of my own doings, at the very end of my tether, have prompted me to these dates, for I know, full well, their practical value in the eyes of some of my best friends, and others may rely on them to the very letter.

Next, after the *Asters*, should be sown *Sweet Williams*, *Wallflowers*, *Antirrhinums*, *Picotees*, *Perennial Larkspurs*, *Ipomopsis*, *French Honeysuckle*, *Columbines*, *Cowslip*, *Polyanthus*, *Auriculas*, *Brompton* and *Queen Stocks*,

Trachelium cœruleum, *Poppy Anemones*, *Spanish Dianthus*, and *Japan Dianthus* of many sorts; the sweetest of all *Pinks*, *Dianthus plumosus*, and varieties, and *Scarlet Lychnis*, all for next year, and all in the open ground, except *Ipomopsis elegans* and *Trachelium*, which, with *Eccremocarpus* and *Maurandias*, should be in pots, in a cool frame, and to be housed in winter. The smallest packet of seeds of all these would furnish plants enough for a good sized garden. The *Rock Pinks*, and *Mountain Pinks*, and *Spanish Pinks*, and *Mule Pinks*, are just as numerous as *Geraniums*, or *Calceolarias*, or rather *Cinerarias* from seeds. One could buy seeds of twenty kinds of the *Pink*, or *Dianthus* tribe, and each kind would be likely to afford many variations; for rockworks they are indispensable; for cut flowers, some of them are among the best; for light borders, in a mixed garden, they would last for years; and for keeping up the stock, many of them seed, and others are kept by cuttings, just like the common *Pink*.

The middle of May is also a good time to sow the seeds of *Hollyhocks*, as it is putting unnecessary stress on ourselves to sow any of those which I have named earlier in the spring, for do what we can they will not flower the first year; and by sowing them in April, the seedlings must be watched and looked to at the very busiest time of the year, and before the bedding plants are all got out; but by deferring the sowings till after the middle of May, the seedlings come in for transplanting just at the easiest time for us, after the beds are all planted.

RAISING PERENNIALS AND BIENNIALS FROM SEED.

There is no cheaper way of filling the borders, or keeping them full, than that of raising plants from seed, besides the chances of new varieties. There is hardly a plant worth having which one cannot buy the seeds of now-a-days. A plant which will cost ninepence or a shilling, next spring, may be had, by the score, from seeds before that time by a little forethought; and I know of no better time for sowing seeds of all our hardy perennials, or biennials, than from the middle to the end of May, when one has plenty of time to look after them till they are past nursing and can take care of themselves. The best and cheapest way for sowing would be to dig up a spare border, or any piece of light ground, to rake the surface as fine as possible, then give it a good soaking of water, and next day it is fit to receive the seeds; small, narrow beds are best, the seed to be sown rather thin, and a barrow load of fine, dry, sifted mould to be at hand for covering them, so that each kind may be covered according to the size of the seeds; generally, a quarter-of-an-inch is a covering thick enough for any of these seeds, but if the very small seeds are just covered it will be enough. If this miscellaneous assortment is sown in the usual way, like so many *Cabbages*, or *Lettuces*, and "raked in," as we say, the chances are that one-half of them are too deep, and the other half not so deep as they ought to be, as they cling to the little lumps of soil on the surface, or go after the teeth of the rake. No, there is no better way of covering flower seeds than by hand from a heap of sifted soil, and when the bed is well watered before the seeds are sown, there will be no danger of the surface "caking," as no more watering will be necessary before the seedlings are up, unless the weather is very dry indeed. Where the ground is liable to cake after watering, a little sifted leaf-mould put all over is the best preventive. A reel of white cotton run across, or along, the best, and fastened to little sticks, will keep off the sparrows and other birds, if anything will.

CHRYSANTHEMUMS.

They should not be allowed to flower more than two years running on the same soil. This is a good time to turn up the old stools, with all the soil they will carry, to get rid of it, and to put a couple of spadefuls of fresh soil in the hole, as all the soil next to the roots is sure to be "done for." Then begin to divide the old stool into colonies, taking so many of the outside shoots as the best; about five or six of these shoots in one piece, and with the small *young roots only*, will make very large plants by next autumn, to flower better than they have yet done, as, besides having fresh soil round about, they must have a spadeful of rotten dung put under them, but not near the roots, for that, indeed, would be daft work; the rotten dung must be down *one foot* lower than the roots, and a quantity of fresh soil must come between it and the said roots. The reason for this is very clear,—all the shoots must be topped about the last day in May, and the strongest of them again about the 20th of June, and it is not till the side-shoots from this last stopping are coming up that the roots ought to enter the rotten dung. Where a long stretch of a low wall is to be covered with Chrysanthemums, it is a good plan not to stop every other plant, but to let them run as fast and as high as they can go; then, by stopping the other half, the bottom of the wall will be better covered, and the top of the wall will be better filled with bloom.

I do not approve much of watering Chrysanthemums in the open ground, and this rotten dung, at such a depth, will do away with the necessity of watering, in a great measure; the roots are apt to run nigh the surface, and as the surface of the richest ground is not so rich as lower down, the best way is to entice the roots to go deeper than is their wont, and nothing will do so well as the rotten dung. To attempt to grow Chrysanthemums in pots all the summer is little short of madness; it is all very well for gardeners, and people who study to "do" them for shows, and all that kind of excitement, but for the general run of the world, nothing is so foolish, or more likely to be a dead loss, as compared to the health, bloom, and foliage, that can be had from growing them in an open piece of ground, in the kitchen-garden, till the buds are fully set; then, by cutting the roots round and round a fortnight or so before the time of potting them, and by a good dose of water as soon as the roots are cut, you may expect the balls to rise as safe as anything.

Instead of bothering about cuttings to get smaller plants for potting, what I would advise would be this, to select the stoutest shoots on a stool, when you are parting them to cut off the bottom of the shoot, all but one inch, with roots to it, and to plant all these singly, and only a few inches apart each way, for a time; as soon as they got hold, and began to grow away freely, I would then stop them down to within four inches of the ground, and when they broke afresh, so that you could just see the young sprouts, I would up with them, trim the roots a little, and plant them in a piece of good ground, eighteen inches apart in the row, and thirty inches, row from row, if there were more than one row of them. I would stop three of the longest or strongest shoots on each plant again about the beginning of July, and let the rest have their chance.

The way I would do with new Chrysanthemums which were bought in this spring, would be to take a cutting or two from each as early in May as I could get them, and I would call that the first stopping—nothing roots easier than these cuttings in cold or heat, with or without glasses, if the weather is favourable, and they dislike messing about as some people do with almost all their cuttings. I would then plant out the new comers with the balls untouched, just as I would colonies from

an old stool, and the plants from the cuttings I would treat, after they were rooted, just like the single shoots from the said stools. I would no more think of keeping either of them in pots, because they were new, or scarce to me, than I would think of flying; but if they did not grow as strong as my other plants from the old stools, I might be tempted to pot them along with the rest in September. I was quite shocked, one day last autumn, on going from here, through Richmond and Kew, to London, on seeing nothing better, on either side of the way, than the very commonest kinds of Chrysanthemums, so near London, pale, draggled, long-legged, half-starved, poor-looking, miserable things, not worth their salt, and altogether unworthy of the finest drive in England. The fact is, we want a thorough routing out of old Chrysanthemums all over the country, and to turn a new leaf in their management. D. BEATON.

GREENHOUSE GENISTAS AND CYTISUS.

"WHICH is the best mode of propagating the yellow Genista of the greenhouses? When is the best time to do it; and what is their treatment?" I think this matter has previously received considerable attention, but I cannot lay my hands at present upon the article. A few of the chief points referred to will, however, bear repeating, for the benefit of fresh subscribers.

There are few things more attractive in the winter and spring months than these yellow-flowering plants. In a house kept to a temperature of from 45° to 50°, with a rise of 10°, or more, from sunshine, these plants may be had in bloom all the winter. With an average temperature of 40°, they will not bloom until the days lengthen in March and April. There is a little difficulty in fixing upon a generic name for a particular species; as what is a Genista in some places is called a *Cytisus* in another. One of the most beautiful of the group, and most suited for small houses, is a species or variety seldom met with in catalogues, called *Attleana*, but which is grown by the London nurserymen; a dense, compact little bush; a fine specimen, ranging from fifteen to twenty-four inches in height, and quite as much in the diameter of the head. This I should consider to be a Genista, but better authorities term it a *Cytisus*. Taking the recognised nomenclature, and merely hinting that the treatment necessary for the two genera are very much alike, the following, after *Attleana*, may be considered the sorts best worth growing:—*Genista congesta* and *monosperma*, both deciduous, and requiring to be merely kept from frost and damp in winter. *Genista canariensis* and *linifolia*, both evergreens, and requiring in winter, to keep them healthy, a temperature not much below 40°. Of the *Cytisus* group, the hardiest used for the greenhouse is *racemosus*, then *proliferus* and *latifolius*. The spikes of the latter are large, and of a deep yellow-orange colour. All these will bloom freely the second and third year, and may be grown to a height of five or six feet, if desirable, with width of diameter of head in proportion. For small houses, plants two to three feet high will be large enough, and frequent propagating will keep up a nice, healthy, clean stock. Great quantities of these different varieties are grown for the London market; there will, therefore, be little difficulty in getting the best kinds, though different growers have them by different names. For market purposes, *proliferus* and *racemosus* seem the most common.

Propagation.—The easiest mode is by seed. This should be sown in a hotbed in spring, and the plants be potted off when two or three inches in height. These make the most robust plants, but they require a good amount of stopping to make them bushy, and are not inclined to bloom freely quite so soon as those raised by

Cuttings.—As respects *time*, March, April, and May are the most suitable, and the following are the modes most likely to ensure success. Prepare a four-inch pot for cuttings by filling it half full with drainage, then a little roughish peat and loam, covered with finer of the same material, and surmounted with at least half-an-inch of fine sand. Set the pot, overhead, in a pail of water, for a few minutes, and then take it out and allow it to drain for a couple of hours. Put a little fresh sand loosely on the top, press it a little, and it is fit for receiving the cuttings. Before inserting them, however, place this prepared pot inside of one a size larger, so that the two rims will stand about level, and then fill the space between with moss or sand, and have a bell-glass of a size suitable to stand between the two rims. All is now ready for the cuttings. During the months referred to, you will find numberless little shoots, from one-and-a-half to two-and-a-half inches in length, all along the main shoots. Slip off the requisite number of these close to the stem, giving each cutting, therefore, what is technically called a *heel*. Dress any film away from such a place; with a sharp knife remove a few of the lower small leaves, and insert them firmly in the sand, using a small dibber, like a lady's bodkin, and filling up every little hole with dry sand before gently watering the cuttings all over. When the tops are getting dry place the bell-glass over them. If it is of a conical shape, the condensed moisture will trickle down in the space between the rims of the two pots, and you will gain two objects—lessen the necessary attention to watering, and lessen the chances of your cuttings damping off. I may add here, however, that though I prefer these side-shoots to cutting up longer and more succulent ones, I would always choose the little shoots that showed fresh growth just commencing at their points. These will answer better than those standing quite still, or those growing freely. If this pot can be placed in a mild hotbed, with a bottom-heat of from 56° to 70°, and a top temperature of from 50° to 60°, the cuttings may be said to be placed in the most favourable position. A little shade, in bright days, a sufficiency of moisture, and a little air, by tilting the bell-glass a very little at night, will ensure success. I mention these minutiae to render success more certain, and because the young beginner who thus manages a *Genista* will have less difficulty with more tender things; but I have struck them freely in such a slight hotbed without any bell-glass at all; and after the month of April have managed them by means of a bell-glass in a common greenhouse, giving the cuttings what shade they required by means of a piece of paper, and setting the pot behind some pot of a larger size. When the cuttings are struck, they should be potted off into small pots, kept rather close, and in a moistish atmosphere at first, and when growing freely be gradually exposed to more air, and be housed again by the end of October.

GENERAL MANAGEMENT.—*Soil.*—When young, loam, leaf-mould, and heath soil, in about equal proportions, will suit them well; as the plants get older, the loam should preponderate, with rich dressings, and manure waterings when the plant is growing, and when in bloom.

Temperature.—This has been already referred to. A very slight amount of frost injures them. I had some of the hardiest killed outright by some of the first frosts last November.

Watering.—This must be regulated by temperature. In winter, in a low temperature, they will want but little; if growing in a heat of 45° to 50°, they will want a liberal supply, with syringings over the foliage in a sunny day. When the bloom opens, discontinue the syringings, and give a little manure-water at the roots. When the flowering is over, and what pruning is necessary done, syringe with clear soot water, and clear

sulphur water frequently, and as growth is proceeding, set the plants in a shady place out-of-doors at first—and then in a few weeks in the sun; and during that period, frequently lay the plants down and syringe the head all over, above and under the foliage, with weak soapsuds, clear soot water, and clear water, alternately, in order to prevent their great enemy, red spider, securing a lodgment.

Pruning.—In close, compact kinds, as *Attleana*, little more will be necessary than removing the flower-stems. In such kinds as *Genista canariensis* and *Cytisus proliferus*, it will be necessary to shorten back the shoots a little, so as to keep them bushy. After that they should be kept closish, and well syringed, to encourage growth, and be exposed to more air gradually before turning them out-of-doors.

Potting.—In old plants this should be done after pruning, and when the new growth is proceeding freely. If not done then, it should be deferred to the beginning of September; if done much later, the flower spikes will suffer, if wanted to bloom early. If well top-dressed, and the drainage examined, the plants will do in the same pot for several years.

Position.—Greenhouse from the end or middle of October; an open, airy position when in bloom; closer and shaded when cleaned and pruned; more air and full light as growth is progressing. A shady place out-of-doors in June and July, and part of August; a more exposed place afterwards, keeping the pots shaded, but not the tops.

As a beautiful accompaniment to these yellow-flowering shrubs, allow me to recommend the graceful, white-flowering *Cytisus filipes* (thread-stemmed), a native of Teneriffe, and which requires similar treatment, only that a warm part of the greenhouse will not be objected to; a portion of heath soil in the compost will be relished, and, when well established, pruning rather freely will be necessary, to keep up a succession of long, slender, flowering spray shoots. Such a species would be interesting as a weeping plant, grafted standard high, on any of the *Cytisus* tribe.

GRAFTING CAMELLIAS.

"I have a red Camellia, with a poor flower, but a good stock; I should like to graft it. Would you instruct me how? Say what kind would answer best, and if it would be proper to use more than one sort."

You may use as many kinds as you have got separate branches or twigs upon your plant, but one sort is generally preferred, though in a small house several kinds on one plant might be more interesting. In doing so, it will be as well to choose varieties as nearly equal in vigour of growth as possible, or the stronger will rob the weaker. This attended to, one sort will graft just as well as another. If any difference, perhaps the double white, *Chandlerii*, *Doncklaarii*, *Fordii*, &c., take most readily. I fear, however, that though there is no difficulty in doing the grafting part, you are rather past the time for being quite sure of success. That success is greatly owing to two things. First, having the stock a little in advance of the scion; and, secondly, having the scion as much in a dormant state as is consistent with the healthy action of an evergreen greenhouse plant. In other words, the buds on the young shoot to be used as the scion should be seen and swelling full, but they should not be burst or growing. This season is late, and you may have no difficulty in procuring scions of this description, especially if your Camellias had not been much forced; but if the shoots of last year are breaking their buds and growing, I would advise letting the grafting alone until next February or March, which may be considered the best months in the year for the purpose, though any time will do that secures the proper

condition of the stock and scion. I mention these months, and would even add the first part of April for late plants, because you will not have to wait so long for a junction, as if grafting at an earlier period; though, with this exception, any time would do after the young shoots were thoroughly ripened the last autumn.

Conveniences.—A close, moist atmosphere is of importance for securing success. In a greenhouse, that may be secured by placing small plants under a handlight, and keeping them shaded and close as necessary. In your case, possessing a vinery at work, it would be more easily done, and the heat necessary for the Vines would just suit the grafted plants, if not above 60° with fire heat. For Camellia grafting, and for Oranges, and many other things, nothing beats a sweet gentle hotbed in which to set the plants when grafted, plunging them in a bottom-heat of 65° to 70°, and allowing them from 55° to 65° top-heat. If the stocks stood there a week before grafting, and the scions were kept rather cool for a similar period, all the better. In such a case, the glasses must fit tight, and, independent of gentle syringings, the temperature during the day must be kept down by shading from bright sun rather than by the admitting of air. Various contrivances may be resorted to when there is no hotbed; for instance, the handlight, as previously mentioned. On the floor of a vinery a handlight might also be so used, with or without sweet fermenting material beneath it. You do not state how large your plant is, probably too large for either frame or handlight. But after being well watered, there can be no objection to lay the plant down, either in a hotbed, or in a pit, or even, on the floor of the house, and gently surrounding the grafts with warm leaves, or shading it in a warmish house with bleached calico. I have frequently seen large plants grafted all over successfully by thus laying the plant down on a bed inside of a house. These means, though not essential, are great accessories to success, as tending to husband the resources and stimulate the growth of the scion, and the consequent junction of scion and stock. Having satisfied yourself as to the fit state of the scion, as described above, and secured the best convenience in your power, the next thing is the

Operation of Grafting.—I have done this in various ways, and with little difference as to the result. Sometimes, I have merely shortened back the head of a young stock, or cut back the respective branches of a larger plant, leaving some buds on the stock or branches higher up than the place I had fixed on for grafting, to draw the sap up, and in very particular cases, I would prefer this mode. In other cases, the stock was cut down, or the branches were shortened in at once. I would prefer the first method, where I had not the help of a hotbed; and as soon as the scion had taken, these buds on the stock could be rubbed away, and the piece of wood ultimately cut back. With the assistance of a handlight, or a hotbed, I should prefer cutting the stock as far back as necessary at once, and graft as I would do an Apple or a Pear.

Whip or side-tongue grafting is generally adopted. If you have plenty of shoots of last summer's growth for scions, they may as well be cut into pieces containing three or four buds. A piece with one bud will do if more is not to be got. With a piece of three or four buds, you may have one at the base of the scion. The great thing in grafting is to unite the liber, or inner bark of the scion, with the liber of the stock. If the stock or branch is small, you may do this on both sides. Whether small or large, these two liber must join on *one* side. The stock, as we have supposed above, being cut back as far as necessary, a razor knife is used to remove a small slice on one side, clearing away the bark, and a little of the wood, and sloping upwards, of a width as near as possible to the diameter of the scion. A similar

sloping cut is made downwards at the base of the scion, and opposite a bud, if the base is so furnished. These cuts may be of any length, according to the length of your scion, from an inch to two or more inches. Much depends on the cleanness of the cut and the sharpness of the knife. When you see that the scion and stock will fit nicely, you may tongue them together, by making a slit downwards about the middle of the sloping cut of the stock, and another slit upwards in the scion, so that they may fit into each other. This *tonguing* is by no means necessary, and where the stock is larger than the scion not very easily performed. Its chief use is just to hold the scion and stock together. It may well be dispensed with, provided you are sure that in tying the scion and the stock together you join together the inner bark of both, at least on one side, and after you have removed the small sloping slice from each, there is no difficulty in holding the scion in its place by one hand and tying it by the other. A piece of good matting is as good as any thing for the purpose; woollen thread also does very well. When properly secured, the next thing is to keep air from the parts, and for this nothing is better than a lump of well-wrought clay; rub the stump over with it after tying, and then place a smaller piece neatly all over it. If not quite certain of a moist atmosphere, the clay might be tied round with moss, and kept moist.

I have already alluded to the best *position* for such a plant, or plants. When the scion grows freely, air must be admitted by degrees, and the clay and string be removed. If the space is not well filled up, it will be advisable to tie loosely again, and cover with moss to keep out the air and light. A little extra care will be required for such plants during the first twelve-months.

INARCHING.

"Which is best—to inarch or graft Camellias and Oranges?" I prefer grafting, as above. Some prefer inarching. It is just grafting by approach; the two plants are brought together—the stock is partially or wholly reduced, and the respective slices of bark and wood being removed, the scion and stock are tied together, the scion deriving its nourishment from its own plant until it has fairly taken hold of the stock, when the connection is severed, doing it generally by bit and bit at a time, so as not to make a great check at once. It will be perceived that the plants must stand together until the union is effected, and sometimes it is a long while before that is accomplished. There is a sort of intermediate step, which is frequently adopted, when, as in the case of our correspondent, it is feared the buds on the scion may be too forward, and which may be resorted to at any time, when there is no convenience of a hotbed or handlight for placing the grafted plants in, namely, cutting the scion much longer than it requires to be, fastening the top in the usual manner, and then placing the lower end in a phial of water kept regularly supplied.

RECIPROCAL INFLUENCE OF STOCKS AND SCIONS ON EACH OTHER.

I confess that here I am next to bewildered. Much here still requires elucidation. Would that some of our great men would give us the result of their experience. Many feats, isolated in themselves, if attempted to be reasoned upon, would stamp many an unlucky wight with heterodoxy. Just recollect all about the circulation of the sap theory, as propounded a few years ago, and the orthodox from Professor's chairs now. The scion has no influence on the stock, says one. How, says another, do we get the long naked roots of our best cherries, and the matted wig-like roots of the Morello? How will grafting with a variegated scion

make a stock frequently produce variegated shoots? I have met with some singular instances among Vines, such as a graft so changing the stock, that that stock threw out a shoot, several feet below the graft, of the same kind, and totally unlike the stock originally. I have also found that several of the bad qualities of a Vine have conveyed themselves from the stock into the scion of the desired variety. One of the best gardeners in Britain has been trying, for years, by a series of grafting and re-grafting, to secure the fine berry of the *Cannon Hall Muscat*, with as good a certainty of the Vine setting its fruit as freely as the *Muscat of Alexandria* generally does; and he is most sanguine as to the result. I throw these up merely as feathers in the wind—to mark a field of which we as yet know but little.

HARDINESS OF THE CHINESE AZALEAS.

It will be recollected, that I mentioned, some time ago, that my friend, Mr. Fraser, of Luton Hoo-Park, had found the white Azalea quite hardy. About a month ago, I walked through the interesting American ground there, and though sorry to find many of the reputed hardy hybrid Rhododendrons cut down to the ground, if not killed altogether, numbers of these white Azaleas of all ages—some quite young—were quite healthy, scarcely browned at the points, the buds being strong and prominent for bloom. Many varieties, raised with a good dash in them of the old purple *Phenicea*, were also in good health; and, perhaps, to many, the chief wonder of all would be, their growing freely in the marly clayey loam I previously mentioned—their fibres hanging in it like a wig, after refusing to enter the compost prepared for them, of which vegetable matter that had been under water formed a constituent.

R. FISH.

CHIRONIA GLUTINOSA

(CLAMMY CHIRONIA.)

THE Chironias are a small assemblage of plants from the Cape of Good Hope. They are all evergreen, and require the protection of the greenhouse. The one I have selected to recommend to the notice of our readers is, I consider, the best of the genus. The reason why I write about it is, that it requires a somewhat peculiar management in order to grow it to perfection, and thus cause it to produce its beautiful flowers in profusion.

HISTORY.—The generic name is a classical one, after *Chiron*, one of the centaurs, said to be the father of medicine. It was introduced from the Cape, in 1844, consequently, it is, comparatively speaking, a new plant. It belongs to the Gentianworts (*Gentianaceæ*).

DESCRIPTION.—A straggling bush, with long, oval-shaped, bright green leaves. The flowers are produced singly at the end of the shoots. They are of a beautiful rosy-lilac colour, and fully an inch-and-a-half across. The tube is short, and the four divisions spread flat, forming almost a perfect circle. The plant flowers freely, so that a healthy bush will have many flowers open at the same time. **Duration.**—The bloom, if moderately shaded, will last four or five weeks in beauty. The buds do not open all together; hence, there is a succession of flowers. The floral leaves are covered with a viscid, shining juice; hence, its specific name.

PROPAGATION.—It strikes readily by cuttings, and now is a good season for that operation. Take a bell-glass, five or six inches diameter, and a clean pot a little larger, just to allow the bell-glass to rest upon the sand within it. Drain it well, that is, fill the pot at least half full of clean crocks (broken pots), the

larger size at the bottom, and the smaller upon them. To prevent the soil from choaking up this drainage, put upon the crocks a thin layer of the siftings from the peat. Then fill up the pot to within an inch of the rim with heath-mould roughly sifted, and upon that an inch of fine silver-sand, press it down gently, and strike it off level with a straight-edged stick; give a gentle watering to make the sand firm, and then leave it to settle, and look out for and prepare the cuttings. The best are the young tops, two or three joints in length. Trim off the lower leaves with a sharp penknife close to the stem, and cut off the bottom right across, just under, and close to a joint. Prepare as many as will fill the pot. If you have not sufficient for a pot of the dimensions given above, then prepare, in the same manner, a less one, and a less bell-glass to fit it. Insert the cuttings neatly in rows across the pot till it is full, putting them in down to the first pair of leaves; then give another gentle watering from a very fine-rosed pot. Let the pot stand in a shady place for an hour to dry the leaves, and then place on the bell-glass, and place the pot on a heated surface, if at hand, or in a shady part of a warm stove, or propagating-house. If the sun at any part of the day shines on the bell-glass, shade it immediately with a sheet of white paper. I use old newspapers for that purpose. If the sand becomes dry, then take off the glass, and give a little water, replacing the glass as soon as the leaves are dry. By this close attention, *never relaxed*, almost every cutting will strike. I have been very particular in these directions, and whoever wishes to succeed must be equally particular in following them up in every particular point. This plant is not difficult to increase, if due pains are taken; and unless the cultivator resolves to give the necessary attention, he had better never attempt it.

As soon as the cuttings show growth, the glass should be lifted off for an hour in the latter part of the day, gradually increasing the time, till at last the cuttings will bear it off altogether without flagging. They are then certainly rooted, and should be potted off immediately; previous to doing so, prepare a sufficient quantity of the following compost:—Three-parts fibry heath-mould, one-part light turfy loam, with a liberal addition of sharp, white sand. Mix this compost well, and pass it through a moderately fine sieve. Take a sufficient number of the smallest 60-pots, drain them well, and place them handy on the bench; then turn the plants out of the cutting-pot very carefully, and separate them from each other as carefully, preserving every root entire; pot them as quickly as possible; give water gently, and place them under a large hand-light, one that will hold the whole batch; shade closely for a few days, sprinkling them whenever they are dry with tepid water. As soon as they begin to grow again, give air and less shade, inuring them gradually to bear the full light and air. Then place them in a cold frame, nipping off the tops to cause them to make more shoots. The frame may be opened every fine, cloudy day during the summer. In about two months they will have filled the small pots with roots. Then repot them, and keep them in the frame till the frost warns you that it is time to remove them into the greenhouse. Place them on a shelf near the glass, and give due supplies of water in the morning, through the autumn and winter. They should be nice, bushy plants by the spring, and then commences the season for the

GENERAL MANAGEMENT.—**Potting.**—The best time for this is the first week in April. Have ready a sufficient quantity of clean pots, two sizes larger, and compost in a proper condition, that is, neither wet nor dry, and not too finely sifted; and plenty of crocks of various sizes. Drain the pots well, and proceed in the usual way to pot the plants. They may now be placed a little further

from the glass, and now is the time to prepare each plant to make a shapely bush. That must be done by tying out to neat small sticks the lowest branches, and stopping the ends of every shoot. Some of them may show flowers, but these must all be taken off, and none allowed to bloom the first year. When all are potted, tied out, and stopped, then place them in the warmest place in the greenhouse, avoiding any position where there is a cold draught through the air-openings. Great attention must be paid to watering; they must have enough to wet the earth thoroughly, and no more till they are dry again. If large plants are desired in a little time, repot again in June, and during the summer keep them under glass, shaded during sunshine, and the glass on in heavy rains. In mild, cloudy weather they may be fully exposed. In the autumn, replace them in the greenhouse, and attend to the directions as to watering, &c., during the winter. The summer following they will flower beautifully, and reward the cultivator for his trouble and attention with their beautiful flowers. When the bloom is over, cut them in rather severely, and repot, and treat in the same careful manner.

T. APPLEBY.

HARDY FERNS.

(Continued from page 10.)

SCOLOPENDRIUM.

A GENUS of handsome Ferns, separated from *Diplazium* and *Asplenium* by Mr. John Smith, of the Royal Gardens at Kew. They may be distinguished easily by their seed-cases slanting upwards, and being placed between the veins at some distance from the midribs, where they are sometimes in one line and sometimes in two. The seed-vessel cover, *indusium*, also is special, sometimes linear, and in other cases hollow or vaulted. They may be known, also, by their long, sword-like fronds. The generic name is derived from *scolopendra*, a centipede; the long lines of seed-cases are supposed to resemble the feet of that insect.

SCOLOPENDRIUM VULGARE

(COMMON HART'S-TONGUE FERN).

A British Fern of great beauty, common almost everywhere. The greatest quantity I ever met with in one locality was on a sloping bank in an open wood, about three miles from the Phoenix Park, Dublin. The bank was literally covered with them, and many of the fronds were extraordinarily large, measuring three feet long. My friend, Mr. Frazer, landscape gardener, of Dublin, was with me, and had some difficulty to draw me away from such a grand display of this fine Fern. I have found it also in great plenty in some parts of Wiltshire, clothing sloping hedge-banks; it is also frequently seen growing out of the bricks in old wells, where it flourishes very freely. On the hedge-banks, the fronds are short, seldom exceeding eight inches in length. Fronds simple, shining, of a lively-green; long, strap-shaped, tapering to a point, and heart-shaped. Margin smooth and entire. Stems scaly. Seed-vessel long and narrow, and covering the greater part of the frond. Root-stock creeping slightly. Increased readily by division.

S. VULGARE POLYCHIDES.—A variety known generally by the name, *angustifolium*, narrow-leaved, found near Bristol. Fronds simple, though sometimes they will come pinnatifid. They are then very curious, long and narrow, cut into segments over-lapping each other. Seed-vessels very narrow, and placed in the hollows, and sometimes on the segments, only occupying three-fourths of the under-side of the frond. Not commonly

in cultivation. I have only seen it in one place in Gloucestershire, and in my own nursery. A very distinct variety, and may be increased, though very slowly, by division, when the plant becomes large.

S. VULGARE MULTIFIDUM (Many-times-divided). — Fronds split up at the apex into many irregular divisions. Sometimes the frond has many branches from the base, and each branch is multifid at the top, and often quite tasselled, and becomes so heavy as to droop downwards. This singular variety is often varied again, by the midrib dividing at the apex, and again by being divided in another style without tassels. These two latter varieties are, however, not constant on the same plant. I noticed, in Ireland, many plants with forked branches, and this variety is sometimes called *furcatum*; but none of the three are distinct enough to be separated from *multifidum*. Increased by division.

S. VULGARE UNDULATUM. — Frond simple, strap-shaped, tapering to a point, where it is sometimes (but rarely) divided. The margin is beautifully waved, almost plaited, like a shirt frill. I never met with this variety bearing seed-vessels. It is the most distinct and most beautiful of all the varieties. Grown in a peat border, it forms quite a bush, and is then very ornamental throughout the year.

When a plant has become large it may be increased readily by division. Take the plant up, and shake off all the soil, then pass a knife through between each crown, and with the hand disentangle the roots from each of the other divisions; pot them in suitable sized pots, in any open, fibrous soil mixed with leaf-mould and sand, place them in a cold frame, and shade them from the light for a few days, and from the sun for a month; they will then have made fresh roots, and will bear to be fully exposed. All the *Scolopendriums* should be propagated in a similar way. If these curious varieties are grown in a greenhouse, they display their diversities to the greatest advantage, and make splendid fronds. As they are all evergreen, and very handsome, very hardy, and not easily lost, every grower of hardy Ferns should try to procure all the varieties.

SITOLOBIIUM.

Divided from *Dicksonia* chiefly on account of the species being deciduous, more delicate structure, and creeping root-stock. There is only one species that is hardy. The name is derived from *sitos*, corn, and *lobos*, a lobe; the fructification, or seeds, being placed on the segments or lobes of the leaves.

SITOLOBIIUM PUNCTILOBIUM (SPOTTED-LOBED).

A North American Fern of great beauty. It is the *Dicksonia pilosiuscula* of Willdenow, and by that name is well known amongst cultivators. Fronds two feet high, lance-shaped, and thrice-divided, and of a light green colour; pinnæ deeply cut, dentated, or toothed at the margin. Root-stock creeps much, consequently, it is easily increased by division. In the Botanic Garden, at Birmingham, there is a border three feet wide and several yards long, thickly covered with this handsome Fern. The border is composed of sandy peat, and is on the north side of a Hornbeam hedge. In this situation this Fern thrives most remarkably, forming a dense mass of fronds. Though so easy to increase and so easy to grow, I do not meet with it in many places, yet I know no Fern that would give greater pleasure to the Fern-fancier.

DIPLAZIUM THELYPTEROIDES (THELYPTERA-LIKE)

I have just room to notice this large, fine Fern from North America. A friend, last autumn, sent me two plants of it under the name of *Asplenium thelypteroides*;

I have them now in foliage, and they are very fine indeed. Fronds lanceolate, two feet high, pinnated, hairy underneath; pinnæ lance-shaped, stemless, or nearly so, and cut at the edges. Stems scaly, and root-stock thick and creeping. Increased by division. It is the only one of the genus that is hardy.

T. APPLEBY.

(To be continued.)

DISEASES IN MELONS AND CUCUMBERS.

A CORRESPONDENT, "W. W.," writes to us as follows:—"Last year, my Cucumbers (both in the frames and in the open air) looked strong, and promising for a good crop, until they began to bear, when, sometimes one or two branches, but oftener a whole plant, suddenly withered and died, without any apparent cause; for when taken up the roots appeared quite sound.

"Also, my Melons went brown and rotten at the root about the time they begin to set their fruit.

"I sowed the Melons at the end of March, and the Cucumbers from the end of March to the end of May, and the soil I used was about equal parts soil from a light pasture, and black rotten soil of many years accumulating from under a wood-fent, with about a tenth part of fowls' dung, well mixed together.

"The hotbeds were made of horse-dung, several times turned, and covered nine or ten inches deep with the above soil.

"If you can suggest anything to prevent the above diseases again attacking my plants, you will greatly oblige.

"As I intend using some tan this year, I should like to know if old, or new, or mixed will make the most durable hotbed, and how it should be prepared before using?

"Also, which is the best aspect, south or east, for hotbeds to be made? and should I benefit my Cucumbers by applying liquid-manure?

"I have some Cucumbers of the following sorts:—Cuthill's Black Spine, Sion House, Windsor Prize, Kenyon's Free Bearer, and White Turkey. Which are the most prolific? And which the largest sorts?"

Like most things, Cucumbers and Melons are now and then attacked by disease, arising from some cause not always apparent to ordinary observers.

Some years ago, my Cucumbers were attacked by a disease which might be called a vegetable small-pox, the fruit presenting a mass of running ulcers; generally, each spine formed an outlet for a quantity of transparent gummy matter, which exuded, then formed offensive-looking drops of the size of peas, or larger, and sometimes a collection of these tumours rendered the fruit quite useless. In fact, after the fruit was once attacked it was no longer in a fit state for table. The plant, at the same time, seemed healthy enough, but after the disease once attacked it the very smallest fruit became affected, as well as full grown ones, and were speedily rendered useless. I will not here repeat the experiments I made to overcome this disease; one thing, however, I may mention, that I imagined it arose from the plant imbibing some improper juice from the soil, so I changed that, as far as it seemed possible to do, by planting some in a compost in which lime or mortar-rubbish existed to a great extent; in others soot; in others wood-ashes; but all to no purpose; and the season of 1850 passed away with my having very few good fruit; those out-of-doors being affected quite as bad as the frame ones.

Since then that disease has not shown itself in any virulent form, although it lingered on a little the following year. Melons were not affected with it, neither

was the Vegetable Marrow, growing close adjoining the ridges on which the out-door Cucumbers were planted. Melons, however, are sometimes attacked by other diseases; and one they are liable to is a hasty decay at the collar, whereby a previously healthy plant is suddenly carried off, and the hopes of the grower blighted for that season. I think it must have been something of that sort which a correspondent complains of, for now and then a healthy Melon plant will die off from causes similar to what causes sudden deaths in the animal kingdom; yet there is often some other agent at work when a Melon plant dies. Thus the Wire-worm will sometimes suddenly gnaw assunder the main roots. The only remedy for this is to make sure that there is no Wire-worm in the soil, by having it placed a few days in some place where the fowls have access to it, and to encourage their industry in examining, scatter a little corn amongst it, and turn it over once, or oftener. Where this is impracticable, or where the beds are already made up, and it is expected some exist, inserting a few Carrots in different places over it will attract them, and the Carrots being examined now and then, they can easily be killed.

Our correspondent says—"The soil I used was about equal parts from a light pasture, and black rotten mould from a wood-yard, with about a tenth part of fowl's dung." Such a compost is certainly better adapted to Cucumbers than Melons, the latter not requiring so light and rich a soil. Yet his Cucumbers seem to suffer as well, and, most probably, it arises from the presence of insect in some shape or other, contained, perhaps, in the decayed woody matter. If he has any frames now in working order in which the above compost forms the staple, let him plant small Carrots in different places over it. Place also a few cooked Potatoes in small pots surrounded by moss. A few Lettuce plants might also be introduced, and the whole examined, from time to time, to see if anything alive adheres to them. A toad or frog also might be introduced; and be careful in giving and taking away air, keeping up a nice temperature, and in other respects adopting all the methods calculated to ensure success, and most likely the evil will be overcome, unless, as I say, it arises from atmospheric causes, in which case the remedy is a more difficult one. Nevertheless, we would not have our correspondent to despair; if he perseveres, he will assuredly succeed in arresting the evil. And what Melons he has occasion to plant out after this, let him use a stiffer soil; such as is generally regarded as producing good wheat. I have, for an experiment, grown Melons well on a loam stiff enough to make bricks, mixed with a little finer matter, but the mixture was purely mechanical; they were not blanched, the large lumps of loam retaining their tenacity even after the crop was cleared away. Yet it was surprising to see how the Melon roots clasped these apparently worthless lumps of impenetrable matter, and the crop was as satisfactory as could well be; but I do not recommend such an extreme soil, though a sound, strong soil is better than a light, rich one, the latter favouring the production of vine rather than fruit.

TAN VERSUS STABLE MANURE.

Our correspondent also asks if tan be preferable to hot dung; and, if so, which is the way to use it? This is rather a difficult question; but if good, well-prepared dung is to be had, I would prefer that to tan for Melons, as there is often an uncertainty about the heating of tan, and I am far from advising its general adoption, unless in cases where it can be depended upon for giving a nice, agreeable heat; but somehow or other, the recent modes of using this article in the tanning process has certainly been fatal to its fermenting powers afterwards, for it does not heat so well as it used

to do;—where it does ferment, it requires some little time to prepare, as well as dung, or other substances, and the admixture of a little old tan will often correct it much. If the tan be very old, sift some of the fine out from it, and after repeated turnings it will be fit for use, the rankness will have gone off, and when once got into a nice, mellow warmth, it remains longer so than anything else. And, perhaps, a something might be said in praise of its appearance, when used in places much frequented; and for brick-built pits, not otherwise heated by fire or water, or both, a tan-bed is often preferable to hot dung, as the latter cannot well be renovated by linings through the sides of the brick-work, even when the brickwork is pigeon-holed, and where not pigeon-holed, of course the longest enduring heating material is the most preferable for inside, which is tan, when it acts well;—I should like the inexperienced to have some proof of that before he uses it at all; for I have known more than one tan bed refuse to heat, even when there did not seem any reason to prevent it doing so; but it is possible the tan of other districts may be somewhat different.

Our correspondent's varieties of Cucumbers seem all very good—*Cuthill's Black Spine*, *Sion House*, *Windsor Prize*, and *Kenyon's Hothouse*. These are all good, useful sorts, but if he wants one for extraordinary length, and other exhibition qualities, let him try *Mill's Jewess*, *Victory of Bath*, *Man of Kent*, or *Sir Colin Campbell*; only let it be observed, that extraordinary length and other show points are often obtained at the expense of a useful cropper. The best bearing kinds, as *Roman Emperor*, *Sion House*, and others, will often produce three times the number of fruit that a prize one will do, and these, too, not of a despicable size.

J. ROBSON.

NOTES FROM PARIS.—No. 11.

FLOWERS, BOUQUETS, &c.

THE flower markets and bouquet shops are beginning to assume all their usual splendour. For the last two or three weeks there has been a good display of early-flowering plants in the principal markets, and in the shops of the Boulevards. The sorts at present to be seen are Rhododendrons, Azaleas, Acacias, Camellias, Roses, Heaths, and Epacrises. *Dielytra spectabilis* and *Deutzia gracilis* are also in much request. So are young Orange-trees in bloom. At the present time Orange-flowers are in great demand for young communicants, who may be seen every day walking to and from church, robed in white, and with sprigs of Orange-flowers in their hand. Hyacinths, Cyclamens, and Daisies, in pots, are likewise plentiful. But the most *recherché* of all, perhaps, are the Neapolitan Violets, with which small hand bouquets are made, and sold at a sous each, in almost every thoroughfare. These little bouquets deserve a passing notice, for besides their fragrance, they present something unusually neat and simple in their form and construction. Twenty or thirty Violets are tied together round a stalk of the "Spanish Rushes," then two or three leaves of *common Ivy* are arranged and tied immediately under the blossoms, as it were, to keep them together, and preserve them from injury. These Ivy leaves are arranged close to the blossoms, and their margins form, as near as possible, a kind of circle, about an inch beyond the Violets. In general form or outline this miniature bouquet has some resemblance to a composite flower, the Violets forming, as it were, the disk, and Ivy leaves the ray, while the deep green and blue of the one and the other associate very well together, in point of colour. Sometimes a light-coloured floret of Lilac, or of a Hyacinth, is stuck in the centre of the Violets; but whatever it may be, this central addition has its petals open and regular.

These small bouquets are constructed in precisely the same manner as that which I have described in former communications for the large ones.

Another style of miniature bouquet, also very common at present, is composed simply of a Rose surrounded with

neat sprigs of *Arbor-vitæ*, Hemlock, Spruce, or Cypress. The common Hair Moss (*Polytrichum commune*) is also sometimes used for this purpose, but in general, and especially for the Violets, the Ivy leaves take precedence of all the others.

In the larger bouquets, Mignonette is much used for the purpose of filling up, and also for forming a distinct circle. The best examples at present to be seen of these are composed nearly as follows:—

No. I.—Centre—White Camellia.

1st Circle—Mignonette, with half-expanded Roses at certain distances, and slightly raised.

2nd Circle—Cinerarias of various colours, and one or two sprigs of Geranium.

3rd Circle—Tulips and Narcissuses, interspersed with one or two sprigs of Acacia raised a little.

4th Circle—Mixed Crocuses, chiefly blue, with sprigs of Pelargoniums.

5th Circle—Mignonette, and one or two Roses, slightly raised.

6th Circle—Narcissuses, and white Crocuses or Convallaria.

7th or outer Circle—*Arbor-vitæ*, Hemlock-Spruce, or similar evergreen.

No. II.—Centre—Camellia variegata.

1st Circle—Narcissuses, with raised sprigs of Mignonette, or Pelargonium.

2nd Circle—Neapolitan Violets, interspersed with Rosebuds, raised between the sprigs of Mignonette of the preceding circle.

3rd Circle—Mixed Tulips and Crocuses.

4th Circle—Cinerarias (purple), with sprigs of Mignonette here and there.

5th Circle—Narcissuses, Convallarias, or Primroses, interspersed with a few Roses.

6th Circle—Mignonette, with sprigs of Acacia (flowers and leaves).

7th or outer Circle—*Arbor-vitæ*, &c.

In these examples, the Tulips, Narcissuses, Violets, and Mignonette abound; while the Roses, the Acacias, Cinerarias, &c., form as it were the *alto-relievos*, which give elegance and expression to the whole arrangement. They are, however, sparingly used; otherwise, the very end to be kept in view would be defeated. Of the raised flowers Mignonette is the most freely employed. Pelargoniums are used either as raised flowers, or otherwise, according to circumstances. The Acacias and Roses can only be introduced moderately, that is to say, they should be made to keep a respectful distance from one another. Instead of Camellias at the centre, a Crown Imperial, surrounded with a deep circle of Mignonette and Roses may be chosen, and one or two sprigs of Orange blossom may alternate here and there with the Mignonette. The centre may also be composed of a fine flower of *Rhododendron arboreum*; but that is only to be adopted when other flowers of equally warm colours are plentiful at hand. Then Roses, Azaleas, Cyclamens, Tulips, Cinerarias &c., must predominate over Narcissuses, Crocuses, Convallarias, and other sorts of the like tints. In this case even Mignonette cannot be so freely used as in the examples noted. For, as I have before observed, the centre of the key of the whole arrangement, and all the other circles must be composed in accordance with it, just as a melody is regulated by the chords in which it has been struck. To be sure, every one is at liberty to consult his own taste in such matters; but we all know that there are true and false principles of taste. The great charm of a French bouquet, apart from the fragrance of the flowers, is its lightness and neatness, its various colours, as well as its various forms, balancing one another. There is no great excess of one colour, and a great scarcity of its complementary, or corresponding colour.

FRUIT AND VEGETABLES.

The principal fruit merchants have been supplied for a month past with forced Strawberries, which, of course, at such an early season, can only be regarded as curiosities, and they must be paid for accordingly. The earlier productions in this way looked strange enough while the ground was covered with frozen snow; and, indeed,

unless the plants have undergone a course of training for the purpose, Strawberries in February and March have but a very sorry appearance. Now, however, lilliputian baskets and dishes of this esteemed fruit may be seen frequently, and, as might be expected, the berries have considerably more colour and flavour than the winter productions.

Apples and Pears are still plentiful, but at much higher prices than usual. But good eating Apples of a common description are cheap enough to be within the reach of the poor. Hundreds of boats laden with this common fruit arrive in Paris from the Provinces. Even in winter, unless in very severe frost, when the canals and rivers are blocked with ice, there are always several dozens of these large boats in the river near the Church of Notre Dame, and in this quarter of Paris may be often seen one of those busy grotesque scenes which some painters, both literary and artistic, are fond of delineating.

Happily for the poor, vegetables are now somewhat abundant. Potatoes, however, are scarcely to be had for use. The Carrots, Parsnips, and even Turnips are of course of last year's growth, but, saving a little toughness in the Parsnips, these have been well preserved. Some samples of Carrots have been marked with traces of worms; but still there is little to complain of in this particular. Small *Early Horns* of the autumn sowing are selling at five and six sous the litre. Leeks have been very scarce, and very indifferent as to quality during the winter. The latest planted crops are now lifting, and these are much better. This vegetable is a particular favourite with the French, who use it along with the others just named in their soup—a kind of broth, somewhat like the Scotch broth. But the people here do not use barley, nor do they chop the vegetables into hexagons and pentagons, as is the custom north of the Tweed. There is a variety of “celery”* here, having a large, tough, knotty root, which, cut in thin slices, is much used as a salad; but, though the taste is agreeable, these slices, however thin, are very tough, and by no means easy to masticate. This root, however, is now nearly out of season, and its place is being occupied with Radishes, Onions, Lettuces, and Dandelion, both blanched and green. The long variety of Lettuce is as yet rather scarce, and a good stocky head cannot be had under six or eight sous (4d.), though, in a month hence, two and three sous will be the ordinary price. Good heads of Cauliflower are selling at from ten to fifteen sous, and Brussels Sprouts at 15 sous, and upwards, per litre; that is, about 7d. a quart. Salsafy is from eight to ten sous a bundle, or botte. Asparagus, fine, fetches two francs a botte in the market, but in the shops it is much dearer.

By-the-by, a fine new market was lately opened in the Faubourg St. Martin, for vegetables, fruit, and other products of the garden and field. It has been constructed with every consideration for the comfort of the stall-keepers and the public generally, and, as is the custom here, it was duly inaugurated with music, and flags, and a grand ceremony of benediction, in which several dignitaries of the church took part.

HORTICULTURAL SHOW.

A general programme of the Horticultural Exhibition, now soon to be opened in the Champs Elysées, has been issued by the Imperial Commissioners, but it contains little or nothing in addition to what I have already sent you which intending exhibitors ought to know beforehand. It is, therefore, I think, not worth while to translate. I may, however, notice one or two points which will be useful to those who only decide on sending plants and other things after the exhibition is fairly opened, as it must be considered to be from the 1st of May.

According to the Third Article of the programme, plants, trees, shrubs, &c., of every description, whether in flower or not, will be admissible; also vegetables and fruits, either grown under glass or in the open ground. In addition to these, whatever has a direct bearing on horticulture will be readily admitted. In this latter clause are included all kinds of garden tools, implements, machines, ornamental pots, baskets, stands, and vases. In no case ought persons to send articles without first obtaining the necessary instructions from the commissioners, who will inform them, in the

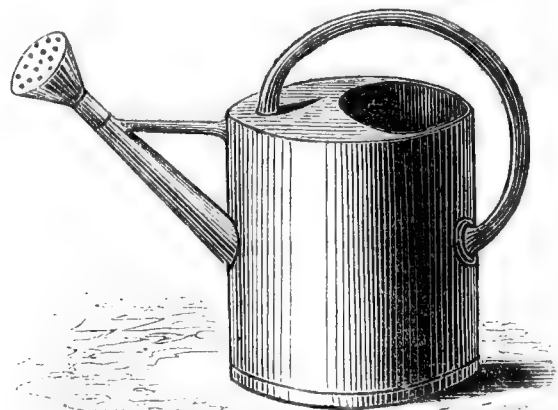
course of a week, whether and when the contributions can be admitted.

The prizes will be awarded in medals, and the successful competitors will be paid all their expenses of conveyance both going and coming.

Let me just again observe, that all letters should be addressed, prepaid, to M. Leon Guay, Rue de Church-Mide, 17, Paris.

The ground in which this exhibition is to take place is being rapidly prepared, although, from what I have just seen of it, I do not think it can be anything like finished by the 1st of May, when the opening is fixed to take place. It will, however, be sufficiently advanced for all immediate wants; and at present workmen are engaged, night and day, in getting up the houses and arranging the ground. A temporary railing, or rather trellis, has been carried all round, and immediately within the enclosure a bank of earth has been thrown up and planted with shrubs. A stove and an aquarium in iron are already in course of being completed (April 20th), and several others have been begun. These houses, and, indeed, the whole place, appear small and insignificant, when we consider that all nations have been invited to contribute. But the commissioners have wisely reserved to themselves the power of limiting the number of objects. It is not likely, however, that they will deem it advisable to exercise this prerogative to any great extent, should they find that by doing so a considerable number of exhibitors will be excluded. On the other hand, it will be found very inconvenient to increase the extent of their premises. But we must bear in mind that it has been found necessary to construct supplementary buildings in connection with the *Palais d'Industrie*, and I think it is highly probable that additions will be required in connection with the Horticultural Exhibition, either in ground or house-room. At present a great number of shrubs, with balls encased in baskets, are laid down at the outside of the premises, ready for planting as soon as their places are prepared. The stove and aquarium already noticed are so far completed as to be ready for glazing. They are both neat houses, though on a moderate scale as to dimensions. Another house, just begun, will be completed in the course of ten or twelve days. One or two rustic houses are being erected, and a rockwork has been thrown up at one side of the stove.

The weather here for the last fortnight or three weeks has been bright, that is to say, scarcely a cloud to be seen all day. But we have a cold east wind, which now and then veers to the north, just to remind us that it is not quite summer yet. However, the trees are breaking rapidly into leaf, and the earlier kinds, such as the Maple, are even now nearly quite green. Apricot, Pear, and similar fruit-trees, are covered with blossom, and the flower-borders are gay with Pæonias, Gilliflowers, Cinerarias, Fuchsias, Pansies, Wall-flowers, and Polyanthuses. But protection during the night cannot, in certain cases, be dispensed with; for we may yet have some cold, withering blasts, accompanied with sleet.



I enclose a small sketch of a garden watering-pot, as generally used here, not because it may be an improvement on that used in England, but simply because it is different in respect to the position and form of the handle, and because it illustrates the readiness with which the French

* *Celerie rave*.

study even the simplest things in common use. A volume might be written on the implements and contrivances used here for the purpose of carrying and lifting. Some of these are wonderfully ingenious; others are simply convenient to handle or use in operation. The French watering-pot differs from the English in having one handle, which extends from the back part of the pot, right over the opening at the top, and the other end is fixed near to the front of the plate at the top. This position of the handle may have been suggested by the natural position of the arm and hand, or it may have been adapted from considerations of economy in time and labour. It may be observed, that in using the ordinary form of pot there is a necessary expenditure of time and labour, in putting it down with one handle and taking it up with the other at the back, for the purpose of watering. The Frenchman is much saving, and after carrying his pot with water to the place required, instead of putting it down, he merely gives his arm a slight twitch forward, and slips round his hand to the back of the pot, which is then in a position to let the water escape by the "rose" in the usual way.

Professor Decaisne has just commenced his course of lectures for the season, called *Cours de Culture*. The Professor is to treat of the plants used in the arts and manufactures.—P. F. K.

PEARS ON WHITE-THORN.

I DID hope the above would have brought an article from D. Beaton on grafting, its uses and abuses. It is an indignity to the Pear tribe to put them on Thorns. They do not like the alliance; it makes them hard-hearted, and has no claim to be looked upon as a curiosity, as there is scarcely a limit as to what you can graft.

The first experiment I remember was with a Pear on the White-thorn, which proved a complete failure, as far as the fruit was concerned; the core was hard and pithy, you could hardly bite it.

I look with great interest to the reports of the Pomological Society, more particularly with respect to Pears, and when I see A's are melting, and B's are not melting, I say to Mr B, "look to your stocks, not Quince and Free, but hard and melting."

If my soil is suitable for Pears, the quality must yield to "art and man's device." It may appear an act of supererogation to graft on a good Pear; but we want a variety in a small space, where all are good.

I have been told the French graft Apples on the Willow; if so, that makes them want that "solidity" so much admired in our kitchen and Crimerean infantry.

Let any of your readers take a scion of any good rosy Apple that wants a little polish, and graft it on a leading shoot of a Keswick Codling,—he will be surprised at the result.—A COTTAGE GARDENER.

EFFECTS OF GRAFTING THE PEAR ON THE WHITE-THORN.

IN answer to the inquiry of "H." as to Pears on White-thorn stocks, I beg to observe, that a cottager in this neighbourhood has both *Jargonelle* and *Hessel* Pears, which he grafted on the Thorn some years ago. The trees are very healthy, and bear abundantly. They are planted on what was formerly an old pit-heap. The soil is very dry, and the trees never suffer from spring frosts.—E. F., *Durham*.

THE PROPER DIMENSIONS OF BEE HIVES.

I HAVE heard it remarked, that "every apiarian has a different mode of keeping bees, and his own peculiar hive;" such I believe to be the case, at least, it is so with me.

Enclosed, I hand you a paper containing dimensions for bee hives; the result of my experience in a *moderately* good bee district. I have studied these little insects for five

years, keeping from six to sixteen stocks, during which time I have come to the conclusion, that, except in very prolific districts, the hives in general use are a great deal too large, both for the convenience and economy of the honey-bee. Taking into consideration the very short honey seasons which, with a climate so precarious as that of Great Britain, we generally have, it is not to be expected that in *one* season an ordinary swarm can fill a hive of large dimensions; or even store enough to maintain it through the winter; for, no matter how large their domicile, the bees persevere in their endeavours to fill it with combs; and it is a well-known fact, that it takes three or four times the weight of honey to make a certain amount of wax; hence, I have come to the conclusion, *that it is not economy to have a hive to contain more comb than is likely to be filled with honey the SAME year.*

How often we see hives, more especially large ones, with scarcely the least vestige of honey; the energies of these industrious little insects having been wasted in the construction of superfluous cell room; whereas, had they had the good fortune to inhabit a hive better adapted in size to their strength, to the prospect of the season, and to the period of the year, the result would have been a lot of well filled combs.

The dimensions of the hive are as follows: viz., seven inches deep by twelve inches in diameter, inside measurement; the sides are made of the best unthrashed rye straw, and perfectly cylindrical. The top-board is an octagonal piece of one-inch mahogany, fourteen-and-three-quarter inches diameter on the upper surface, tapering down to fourteen inches on the under surface. This board is fixed to the straw by three three-inch screws passing right through it, and penetrating the straw beneath. For communication with the super the top-board has seven inch-holes cut through it; these must be covered when not in use by an octagonal piece of three-quarter-inch mahogany, nine inches in diameter on the upper surface, and tapering smaller, as before; this is kept in place by two small iron or wooden pegs, which fit into corresponding holes in the board beneath.

Having the top-board made moveable (by means of the three long screws) is found to be of great advantage; for, when taking the contents of a hive, by simply passing a knife round inside, and unloosing the screws, the combs can be taken out entire.

A window, four inches by three inches in height, incased and protected by zinc, may be introduced at the back if thought necessary. Behind this window a thermometer should be placed, to regulate the temperature of the hive.

The super, also, is to be made of unthrashed straw, six inches in height, by eight inches in diameter, inside measurement, with a window at the back three-and-a-half inches wide, by two-and-a-half inches in height, encased and protected as the lower one. There is no necessity of fastening the super down, the hive and all being under cover.

The floor-board, or bee-stool, as it is sometimes called, may be made of mahogany, or of almost any wood, provided it be in one piece, and of a kind that does not warp; it must be fifteen-and-a-half inches in diameter at the bottom, tapering to fourteen-and-three-quarter inches on the upper surface; it must be at least one-and-a-quarter inch thick, and cut octagonally at the edges to correspond with the top-board. The entrance hole is to be cut in the floor-board, slanting downwards from within, two-and-a-half inches by three-eighths; of course, there must be a small piece of board projecting before the entrance hole for the bees to alight upon.

Provision is made for ventilation by means of a piece of perforated zinc at the back of the board, a good size for the hole of which is two-and-a-half inches square; a corresponding hole and piece of zinc is cut in the top-board just over the bottom ventilator; another piece of zinc, *not* perforated, is made to slide in and out at pleasure; the perforated zinc remaining fixed. The thermometer should always be consulted when ventilation is going on.

When making the holes for the ventilators, care must be taken to cut away only the under *half thickness* of the board; otherwise the appearance of the hive will be injured.

The hives must be placed under cover, at a distance of at least three feet, any number in a row; each having its

separate post let into the ground, to which it is fixed by a rabbet, underneath the floor-board, filling the top of the post, with two pins passing through the rabbet, one on each side.

The height of the floor-board from the ground should be about twelve inches. The stand of each hive being detached from the others greatly facilitates operations with the bees, especially that of weighing; which, we will here remark, is a most important operation, and one which should be resorted to frequently.—J. R. NEAVE, *Fordingbridge*.

FLOWERS OF OUR CHILDHOOD.

I HAVE so often regretted the almost total banishment of spring-flowers from our gardens, that I cannot resist expressing the pleasure I felt, when I saw that Mr. Beaton had come forward with his able pen to advocate the cause of our early favourites, and I offer him my best thanks for his most acceptable article on the "Flowers of our Childhood." Many other readers of THE COTTAGE GARDENER will, no doubt, do the same, for all cling, more or less, to whatever is associated in their minds with the pleasures of earliest days. Well do I remember the delight which I felt in my childhood in gathering spring-flowers for the children of our village, with which to deck their May-day garlands; and for the lads and lasses to wreath around the larger ones, which they suspended across the road from cottage to cottage, at the entrance of the village, in honour of our fair, or feast, as it was called in that part of the country, and which was always held on the 1st of May. Many a light heart and smiling face was there, and many a joyous meeting, for all who had left the village returned, if possible, on that day, and the chat of friends and neighbours went round, and the merry dance on the green was kept up till late, to the music of the well-known gipsy fiddler, who always appeared in his smartest attire on the feast-day; it was even whispered, that the large buttons on his coat were made of "real silver." I know not how this might be, but I know that all were cheerful and contented, for our village was a very primitive one. No public-house was there, and beer-shops were then unknown. These happy days have long since passed away; but the spring-flowers still bloom on, and, thanks to Mr. Beaton's kindness, will, I hope, ere another year is past, be seen in all our gardens, to call up in many hearts a pleasing, though, perhaps, saddened, recollection of the days of their childhood.—A VILLAGER IN DAYS GONE BY.

SIBERIAN FRUIT.

AT page 243, Vol. 1, of an interesting work entitled "Revelations of Siberia," recently written by a Polish lady resident at Berezov, she mentions two or three kinds of fruit, which, though probably unknown to us, are entitled to a record in THE COTTAGE GARDENER. They appear to be akin to the new Rochelle Blackberry, about which enquiry was made in one of its recent numbers. She says,—

"One morning we had a plateful of *Kniazniki* (prince-lings), considered a great treat at that period of the season. They are a kind of berry peculiar to this place, and quite unknown in our country (Poland). They grow on a high, hard stalk, like Raspberries, but nearer the ground. When blooming, their blossom is of the colour of the Rose. Indeed, they resemble Raspberries both in colour and shape, only that they are browner and less succulent. Their juice, though somewhat pungent, is by no means disagreeable. They have a sweet, pine-apple scent, and make most delicious preserves. The woods round Berezov teem with these berries. There is another kind called the *Morozka*, in shape not unlike our wild Mulberry, and like the *Kniazniki*, on a stalk, though it is a much higher one. This berry is of an orange colour deepening into a red on the side exposed to the sun. It is much harder and less juicy than the *Kniazniki*, and on that account is less esteemed."

The same writer also mentions Currants, "exceedingly sour, with kernels hard and large; and Cedar nuts, an abundant

fruit, appearing on most of the tables, and having shells, or rather husks, of a chesnut-brown colour; and another autumn fruit, *glolubica* (French, mirtelles), a berry exactly like our blackberry, the *szernice*, only somewhat larger. It is found in abundance in the woods. We had a dish of these berries with cream, and found their flavour very pleasant."

Much has been done, and, doubtless, much is still doing, by collectors, and other means, to procure fruits, flowers, and vegetables, from various parts of the world; but we yet seem to want a society, or one already in existence might answer the purpose, whose efforts should be especially directed to the work of *correspondence*, to communicate with persons going or settled abroad, with the view of inducing them to collect such seeds, plants, or information, as would be new to us. It was about a week ago, that mention was made in THE COTTAGE GARDENER of Madame Pfeiffer having sent to this country a very fine series of insects, collected during her visit to Amboyna and Ceram. Now this same lady, and there are others of her sex, who, if applied to and rightly instructed, would, probably, enter with zeal into the service, and whose contributions, from time to time, would prove invaluable. The pleasure and satisfaction of being able to promote science, and of becoming public benefactors, would, with many, be a sufficient reward, or suitable acknowledgments might be made in return. The subject is of importance, and, if placed on a well-organized footing, could hardly fail of success.—S. P., *Rushmere*.

QUERIES AND ANSWERS.

GARDENING.

THE SHAPE OF A BOILER LESS IMPORTANT THAN THE SETTING.

"Knowing that you possess excellent information upon the best plan of heating Orchid-houses, I should be greatly obliged by your informing me, in your next number, if you consider the conical self-supplying boiler the best one to use to heat *three* houses, which would take about 250 feet of four-inch pipes and whether you would recommend the *triangular* troughs instead of the pipes. One recommends Parnell's plan; another, the saddle-boiler; others, the self-supplying conical boiler; but your experience and answer will be depended upon.—R. P."

[There was a plan of a double boiler in a late number, which we have no doubt would do its work well. The more surface your boiler, for its size, presents to the fire, and the less of heat mounting into the chimney, by the mode of setting, and the regulation of the damper, the better will your boiler please you. Provided these matters form great items in the arrangement, we care little for the form of the boiler; and we have wrought, conical, self-supplying, tubular, square, saddle-shaped, &c., and, if it is well set, and the fire plays below, round, and above it, we would give the preference to the saddle-shaped, provided we could be said to have a preference at all. If you like the conical best, we can safely say it will answer well, and most gardeners could easily do the same. We prefer pipes to troughing. In the former case, you can dry-heat and moist-heat at pleasure; in the latter case, the more warm your water, the greater the quantity of vapour thrown off. We have met with, and worked, some excellent boilers manufactured in your town, and you possess several citizens that, we presume, understand the matter well. Any further enquiry will meet with due attention.]

COLOURED GLASS FOR SEEDLING FRAMES.

"I was lately in a garden in which there was a hotbed at work rearing annuals, &c., from seeds, and the glass on the frame was coloured blue with sizing, in which had been put a small quantity of Prussian blue. I asked the gardener the reason for colouring the glass; he said, it prevented the sun from drying the soil, and greatly accelerated the germination of the seeds. I asked, why blue light made seeds

vegetate quicker; but he could not explain the philosophy of the subject. Pray, can you? or is it only a fancy of the gardener?—S.”

[Rest assured the gardener was wrong. Repeated experiments have shewn that in spring seeds germinate most rapidly under *red* glass; but in summer it increases the heat so much as to retard the germination. Under *blue* glass the germination of the seed and growth of the plant goes on healthfully; but no better than under common untinted glass. Under *green* glass germination and growth are very slow. Plants under any coloured glass, except *blue* and *yellow*, are more or less blanched.

We have no hesitation in saying that uncoloured glass is the best for all gardening purposes, with the exception, perhaps, of *yellow* glass for Mushroom-houses. “I could not,” says Mr. Hunt, in his “Researches on Light,”—“I could not, with the utmost attention, make the *Agaricus muscarius* grow behind any coloured glass but the yellow, under which it grew luxuriantly. This appears to explain, in some measure, the popular notion that Mushrooms, and plants of that kind, grow most abundantly under the influence of bright moonlight.”]

PREPARING STRAWBERRY PLANTS FOR FORCING.

“I have a quantity of small autumn runners of *Keen's Seedling*, *Hooper's Seedling*, and *British Queen* Strawberries, and should like to know if they would not be preferable to this year's runners for forcing, as I wish to have Strawberries early. If I was to put them in small pots soon, and shift them into the fruiting-pots in June, should I not get stronger plants against winter, as I am in a cold, late situation, and my summer plants do not get so strong as I should wish, though I peg them down into small pots, and shift them into larger ones when they are well-rooted?—N. W.”

[Your case is far from an unusual one; but there is a very good remedy for it, by adopting the growth of two years instead of one for preparing your plants for forcing; but as there will be an article in our paper of next week bearing on the subject we will say no more; but should your case require further directions than is there given, write to us again, and we have no doubt but our departmental writers will satisfactorily meet you views. You seem to be on the right side for ensuring a quantity of good plants for next year, and if the numbers are not sufficient, plant out a few of last year's runners, if you can obtain them, picking off all flower buds, and keeping all runners carefully cleared away, as will be explained in the article alluded to.]

CINERARIA CULTURE.—CALENDARIAL ABBREVIATIONS.

“In your No. 341, for the 10th ult., page 21, treating of Cinerarias, you say—‘Every one thinks he can grow a Cineraria; but there is not a man in a score who even knows how to set about it, &c.’ Now, as they are plants that I am very fond of, and having got some seedlings just into their pots, I shall be much obliged if you will give me a few hints with regard to their proper management.

“Also, in your calendar for the months, I often observe a b. after some of the items in the flower-garden, thus—‘Take stock of your bedding stuff, b.; and bring up arrears, if any, &c.’ Does the b. signify border?—W. O. D.”

[If you have our 5th volume you will find abundance about Cineraria culture there. If you have not that volume, buy our 117th number, which contains an essay upon the subject. At the same time let us observe, that superior skill, first-rate materials to work with, and an indomitable perseverance, do not fall to the lot of one man in a score; therefore, there is not a man in a score who can grow Cinerarias, or Roses, or Geraniums, or Calceolarias, &c., in first-rate style; only one in 500, and hardly that—but there is not the smallest secret in the thing from beginning to end.

The b. and the e. in the monthly calendars, signify the “beginning” or the “end” of the month; or b. before the

10th, and e. after the 20th. The rest of the things may be between the 10th and the 20th, or before or after, like old Moore's weather.]

PLANTING CAMPANULA CARPATICA.—CALANDRINIA SPECIOSA.—STOCKS FROM CUTTINGS.

“I shall feel obliged if you will inform me at what distance from each other *Campanula carpatica* should be, when planted to form a bed? Also, whether *Calandrinia speciosa* is a perennial, as stated in the COTTAGE GARDENERS' DICTIONARY. The tender appearance of the plants leads me to think that it may be a mis-print. Under the head of “Stocks,” in that Dictionary, it is recommended to make cuttings of those that are *double*, to form a supply for the following year. Will you tell me,

“1st. The best time for making the cuttings, so as to have nice bushy plants in the spring?

“2nd. How long the cuttings should be?

“3rd. Which shoots should be selected?

“The difficulty which I see, is this—If the cuttings are made too early, the plants will make too much growth before winter, and look so tall and miserable in the spring. If, on the other hand, it is deferred too long, there is the risk of their not getting sufficiently established to stand the winter.—J. W. S.”

[These *Campanulas* ought to stand only three inches apart every way, outside from outside. *Calandrinia speciosa* is a perennial; but the best and easiest way is to treat it as an annual, and save the seeds every year. Making cuttings of *Stocks* is “love's labour lost.” It is only to satisfy curiosity that one must say it *can* be done. Scotch Firs can also be raised from cuttings, but no one thinks of “doing” them in that way.]

THE BLUE CROCUS.—CLOTH OF GOLD ROSE.—SCARLET PASSION FLOWER.—STAUNTONIA LATIFOLIA.—SOWING POMPONE CHRYSANTHEMUMS.

“The questions I am about to ask may appear so staggering to you, that you will be utterly confounded—like I was, at a correspondent, a few weeks since, asking about growing *blue Crocuses*. Just allow me to say, by way of parenthesis, that we have here many scores of a *blue Crocus*, and I may say it needs no growing; they are in patches, here and there, and we never meddle with them, and yet they flower beautifully, and I may say bountifully, too. Ours, as you must know, is a very clayey bottom, and they seem to like it well. But to my questions. We are wishful to grow three different plants, *Chromatelle*, or *Cloth of Gold Roses*, *Stauntonia latifolia*, and a *scarlet Passiflora*. Now, we are here twelve miles N. E. of Manchester, as near as I can say. Will you be kind enough to say whether *we* may venture or no? and say, also, whether the *Stauntonia* is a twiner or no; because we want it to go up a house side. I have never seen the plant, but on the strength of your judgment we shall purchase one; and please say, likewise, where they may be got.

“What is the price of two or three-year-old plants of *Asparagus* per 100 or 1000? and if a bed is planted now with three-year old plants will it bear next spring?

“Would *Pompone Chrysanthemum* seed sown now produce plants to flower this year?

“*Cedars*, *Deodara* and *Lebani*, and *Auracaria*, have stood this winter with nothing but a little fern over their roots.

“By the way, Mr. Editor, your paper is worth treble its value since you published the portraits in it; but, pray, when are we to have another? and I think it only right and just that our own contributors should be shown unto us face to face first, before nurserymen, whom the majority of us never saw. I should like to see Mr. Errington's portrait very much indeed.

“Excuse this medley, and oblige—EXCELSIOR.”

[Ten to one that your *Crocuses* are the common pale blue, which are just as hardy as the large yellow one, but the dark

blue Crocus is quite the other way; however, you never met with a plant which would not grow very well in some few places. The *Cloth of Gold Rose*, on its own roots, or on the wild Rose, will grow as freely against your house as the Grape Vine; but, in truth, it is not worth nails and shreds, and we would advise you to have nothing to do with it; there are at least five hundred kinds of Roses which are better in any part of England than the *Cloth of Gold*. But for a a Camellia-house, or an Azalea-house, or a Rose-house, or an Orchard-house, it would come in as *one* of the best climbers; it would also do and look well in the Crystal Palace.

The *Stauntonia* has been recommended for a particular purpose, that is, as the best evergreen twiner we have, but not for its flowers. A three-year-old plant of it stood with us this winter, but we would recommend protection to it for the first half-dozen years, and to be cut down in April, during that time, to near the surface of the ground, but to have its own way after the sixth year.

The *Scarlet Passion Flower* is one of the finest stove climbers we have, the easiest to grow, and the easiest to bloom; indeed, we never knew it miss; but 50° is about the lowest temperature for it in winter, and it ought to be pruned in the spring just like a Grape Vine, or like all the Passion Flowers. You ought to get a very good *Stauntonia* under 5s. by this time; but you surely do not mean that we should recommend one nursery before another in a public journal.

Asparagus.—We really do not know the price of Asparagus (generally about 3s. per 100); but you are now too late for planting a bed. Some of our best gardeners could manage to make and plant an Asparagus bed in May; but you may just as well throw the cost to the Crimea as make the attempt.

Pompones Chrysanthemums, to flower this year, ought to have been sown and up months ago. They will not flower the same year from May sowings.

The *Cedars* and *Araucarias* stood out on the bleak moors, in the north of Scotland, with nothing over them but the snow.]

POULTRY.

SITTING VERSUS SETTING.

"The present era is an extraordinary one for fowls. I see, in *THE COTTAGE GARDENER*, a writer who talks of his hens *sitting*; modern authors of duodecimo vols. do the same thing. I have abundance of fowls, and I see abundance; but all our hens, during incubation, *set* in the old-fashioned way. As one of the old school, I should, from curiosity, like to know how these gentlemen's fowls succeed in hatching, by squatting themselves on their eggs *à posteriori*.

"Doctor Johnson says, man *sits*,—birds *set*. Either the language of our vernacular tongue is altered, or these lucubrators on fowls forget the proprieties of the Queen's English.—W. MASON."

[We answered a similar letter some twelvemonths since, and can only assure Mr. Mason now as we assured a Lieutenant-Colonel then, that he is quite mistaken. Dr. Johnson in no work that we know of says that "birds set." In the folio edition of his Dictionary, now open before us, he says—

"To SIT.—To brood; to incubate.

"As the partridge *sitteth* on eggs and hatcheth them not, &c.—*Jer.* xvii. 11.

"She mistakes a piece of chalk for an egg and *sits* upon it in the same manner.—*Addison*."

"SITTER.—A bird that broods.

"The oldest hens are reckoned the best *sitters*.—*Mortimer*."

"SITTING.—Incubation.

"Whilst the hen is covering her eggs the male bird amuses her with his songs during the whole time of her *sitting*.—*Addison*."

Our correspondent will find, if he refers to later authorities, such as Walker and Webster, that they all agree with Dr. Johnson, and that the verb *sit* applies to hens, and the verb *set* to plants.]

WERE MONKS EVER USEFUL?

"At a recent meeting of our Mechanic's Institute a dispute arose as to whether at any period in England the benefits conferred by monastic institutions outbalanced the evils of which they were the origin. They founded vineyards, but they drank deep of its wines. They were hospitable, but they were ambitious. They furnished Dunstons and Thomas a Becketts, as well as Williams of Wyckham, of Malmesbury, and of Westminster. It was determined to ask the opinion of the Editor of *THE COTTAGE GARDENER*, as the parties contended without either convincing the other.—
—, Secretary."

[The question is far too wide for full discussion in our pages, but we must state that we think no one who has studied the history of the Middle Ages, that is, of the centuries between the arrival of William the 1st, and the accession of Henry the 8th, but will have the conviction forced upon him that Monasteries were then our only schools of literature and of the arts of civilisation. The Monks were our only historians, architects, and gardeners. It is scarcely too much to say, that none but they could either read or write throughout England. Not a noble could sign his name; and so gross was the ignorance, that to bite the seal of a deed with his "wang tooth," was one of the best signs of assent to its contents that a Baron could give. In times such as those, the establishment of Monasteries was the establishment of so many storehouses and centres of civilisation; the only places where the treasures of literature, and of the arts could be preserved from the consequences of the laborious idleness of war and hunting, to which all other classes but Monks were devoted.

If you wish for fuller demonstrations of what we have advanced, refer to Turner's *History of the Middle Ages*, or to Merryweather's excellent volume, *Glimmerings in the Dark*. From the latter we will extract what is most appropriate to our pages:—

"The effects of monastic institutions upon agriculture deserve particular mention; in the early days the monks by their own labor converted sterile wastes into fertile and productive lands; soil which had been undisturbed for a thousand years produced a golden harvest; and forests of primeval growth were felled, and brought a rich revenue to the house of God. We learn from Bede, that Esterwine, Abbot of Wearmouth, used to assist his monks in their rural labors; he employed himself in guiding the plough, winnowing the corn, and even forged instruments of husbandry at the anvil; in fact the abbot gloried in the humility of the monk. Even Thomas à Becket, with all his haughtiness and pride, did not refuse to participate in such labors; it is said, that after he was made Archbishop of Canterbury, he would go into the fields and help the monks reap corn and make hay. Michael, of Ambresbury, Abbot of Glastonbury, in the year 1235, applied himself especially to the tilling of the abbey lands; we learn from monk John, that he repaired all the ploughs that had been spoilt in the time of his predecessor, and provided sixteen new ones. The lands which had been alienated from the old abbey, but which he obtained back again by vigorous efforts, he had tilled and cultivated for the benefit of the monastery. It must have been a pleasing scene of rural industry, the labors of those busy monks, with two score ploughs at work; with fields glorying in their abundant crops, lands crowded with luscious fruits, and vines bending beneath the weight of grapes; with droves of near nine thousand head of cattle; fine fish-ponds, busy mills and barns, overflowing with gathered fruits; we cannot accuse the monks of sloth, or entertain many fears, that poverty and starvation were heard to raise their dismal cry at the gates of Glastonbury in vain. The ecclesiastics were also agriculturists, manured their lands and brought them to a high state of cultivation. Richard, Archbishop of Canterbury, and successor of Thomas à Becket, was very industrious in farming the church lands; he enriched the soil with dung and chalk, which Peter of Blois intimates was a common practice among the bishops. Indeed, by these labors, England became so celebrated for its fertility, that William of Poitiers calls it a storehouse of Ceres, from the richness and abundance of its corn.

"Besides this application to the labors of the field, the

monks paid some attention to those luxuries and elegancies which make a country life so fascinating; however much they were disposed to exclude the pleasures of the world from their solitudes, they had no objection to relieve the tedium of their habitations with the beauties of nature. To a mind healthy in its piety, the love of God will lead to a love of nature; and did we want proofs of the influence of the latter, we should find some striking ones in the love of gardening among the monks; the subject may perhaps seem too trivial upon which to bestow much time, but it is pleasant to observe the influence of flowers upon ascetic minds, for it is only gentle hearts that find delight in the beauties of Flora. Brithnold, Abbot of Ely, is celebrated for his skill in gardening; his biographer tells us, that he made the monastery more pleasant and beautiful by surrounding it with flowers and shrubs; he laid out extensive gardens and orchards, and formed a beautiful plantation, so ingeniously, that at a distance it looked like a wood loaded with an abundance of flowers and fruits; all which, continues the monk, added to the loveliness of the spot. The most skilful horticulturists of the middle ages were monks, and the gardens of the convents contained many herbs and vegetables, which were not in common use among the laity.

"The monks were not only tillers of the land, sowers and reapers of corn, but they were also cultivators of the vine, from the grapes of which they made a grateful beverage. This was consumed in the monastery, at the abbot's table, or exchanged in the neighbouring towns for other commodities. The vineyards of Gloucestershire excited the admiration of William of Malmsbury, who says, there were more in that province than in any other in England. Many old writers concur in this opinion; nearly all the churches of Glastonbury are mentioned in Domesday as possessing vineyards. One horse-load of wine was annually paid to the monks of Glastonbury as an acknowledgment for certain lands, called Wine-Land. Vineyards were attached to almost every monastery. Martin, Abbot of Peterborough, planted one in the year 1133. Holtham, elected Bishop of Ely, in 1316 gave a vineyard and a garden in Holborn to his church; and Ralph, an abbot of St. Augustine's monastery, in the year 1320 converted a field at Nordhome into a vineyard. Even Smithfield, now the most filthy spot in London, was, in the middle ages, covered with vineyards: there are but few of us who would not be glad to see Smithfield once more converted into a garden. The produce of these monastic vineyards sometimes proved dangerous to the pious watchfulness of the monks; in some cases a moderate allowance was granted to them; it may be suspected that they did not always rest satisfied with their allotted portion; we have seen how Winibald was compelled to remove his monastery from the banks of the Rhine, in consequence of the indolence which the wines of Mayence diffused over his monks. These vineyards were sometimes sold after having been brought into a proper state of cultivation, and they were often leased out to the laity. The physician of the monastery received a liberal share of the infirmary, and the cellarer reserved a goodly portion for the entertainment of guests. This reminds us of an anecdote related in the annals of Abingdon monastery, which occurred in the time of Abbot Ethelwold. King Edgar, who was a liberal benefactor to the holy monks, came one day to the monastery, attended by a numerous retinue; his object was to plan the erection of some buildings, the foundation of which it is said he measured with his own hands; the only return for this condescension that the good abbot could devise, was a promise of many prayers, and a hearty invitation to dinner. The King graciously accepted the promises, and accepted the invitation, and with a large concourse of the Northumbrian nobility sat down to a goodly entertainment; the board of the refectory reeked with the fat of the abbey lands, and tankards overflowed with generous wine. The King feeling inclined to make merry over his bottle, kept the attendant employed in filling the goblet; he pledged incessantly the assembled nobles, and urged them to drink deep to the honour of their host; in fact, Edgar grew noisy over his cups; the poor cellarer trembled; for, behold! the barrels lacked wine to meet such prodigality. They had for hours drawn liquor, still his Majesty called for more, and the nobles were getting

riotously merry. But why should we be prolix? as my authority asks; a miracle relieved the poor cellarer in his trouble and administered to the bacchanalian orgies of the guests. The whole day did the king sit at the table, and the whole day the servants were busy drawing liquor, to the full gratification of the company. Yet, with all their efforts, the monks could not exhaust the barrels, and although there was but little originally in the casks, there was almost as much, says the monk, when the king and his nobles "rejoicing departed merrily at night."

"Some such miraculous aid as this may account for the abundance of wine which the monastic cellars are reputed to have contained in the more recent and less holy days of Henry Tudor; whether it was a common thing then to find empty barrels filled so miraculously to supply a drunken revel, we know not, but we imagine that it was of frequent occurrence in the old Saxon days; for when Ethelstan dined with his kinswoman, Ethelfrida, a similar miracle attested to the saintly power of St. Dunstan; the mead vessel contained but a scanty portion to entertain royalty and the court, yet, it is said, although the cup-bearers drew liquor all the day the barrel was not emptied. The king and his nobles were astonished, and the saint of Glastonbury became revered; the miracle is not forgotten in monkish annals."]

PARIS INDUSTRIAL EXHIBITION.

THERE are many things to be seen in France. We are to have, this summer, an exhibition in Paris, after the manner of our recent one in Hyde Park, and also a display of flowers, fruit, and vegetables, together with agricultural and horticultural implements. It is very probable, therefore, that many of our gardening friends (blue aproners, as D. Beaton calls them) will be desirous of paying it a visit. This is very natural, and, provided it can be prudently accomplished, commendable. Let me, then, offer a few hints. A knowledge of the French language is not necessary. It has been remarked by a celebrated writer, that France bears the *flowers*, and England the *fruits* of civilization; and to comprehend the fructification of a plant, the eye is more necessary than the ear; and if the ear be shut, keep the eye open. A *passport* is not essential: to obtain one, free of cost, you must dance attendance for two days at the French ambassador's in London;—pay 5s. for it of the French consul, or procure one at a trifle less in France, and then the landlords at the French hotels will ask for and detain both you and it; it has also to be examined and verified. On the other hand, a *passport* is sometimes useful in preventing unnecessary enquiries, and in facilitating a stranger's admission to places of public resort when shut to the Parisians. But in the event of a *passport* not being obtained, a *permit* for embarkation, to be had in Paris for 20d., will be necessary before you can leave France. As to *routes*, there are five, Calais, Boulogne, Dunkirk, Dieppe, and Havre. Calais and Boulogne are in connection with the South Eastern Railway; they are the most direct routes, the sea-passage only two hours, and you go through in a day; but, then, the fare is more expensive. For Dunkirk, there is a steamer from the Irongate Stairs, near the Tower, every other day according to the tide; sea-passage from ten to eight hours; and Dunkirk is well worth seeing. The Dieppe packet starts from Newhaven, in connection with the Brighton Railway; sea-voyage six to seven hours, generally a night-boat; and to Havre by Southampton, the passage is about ten hours; by the three last routes the fares are lower, much of a price, but then you are a day and a night on the journey, which increases the expence and inconvenience. By Havre and Dieppe you pass through Normandy, a picturesque part of France, and both lines meet at Rouen, entitled to a day's inspection. Two years ago, the return tickets on these railways, available for one month, were charged 24s.; but it will be well to consider whether returning by a different route may not be desirable.

Get one sovereign changed into small French coins, at Speilman and Co., 10, Lombard Street, who will give full value for it.

Take no luggage, but merely a carpet-bag, and keep this in your possession—it will save much trouble; show the con-

tents freely to the officials at the French custom-house, and give them your name, without note or comment. Procure, on landing, a good sandwich, or a roll and cheese, and let it stand for a dinner on your journey to Paris. Ale and porter the French know little about, but for 2d. you can get as good a glass of brandy and water as you pay in England 1s. for. If it be desirable to stop on the route, have the name of the town written on a card, show this to the railway officials, and they will set you down. Avoid reaching Paris late at night, and let the porters see the address of your lodgings, if you have one, and they will put you into the proper omnibus. Should it be asked, "How little could a man go and return comfortably for to Paris, and be absent a week?" I would say 50s. provided the fares are the same as they used to be.

	£	s.	d.
Return ticket	1	4	0
Board and lodging, 3s. per day	1	1	0
Extras	5	0	
	<hr/>		
	£2	10	0

An agreement for board and lodging at 3s. per day may be made at several second-rate hotels, or a comfortable bedroom can be had at 10d. per night, and the party cater for himself. Dinners at the Restaurant may be set down at 10d. each, and coffee, with bread and butter, at 5d. Dishes cooked English fashion should not be asked for.

The geography of Paris is easy to understand; the river Seine passes through it the same as the Thames in London. In the streets running east and west, the houses are numbered *from the east*; those running north and south are numbered *from the Seine*. The numbers on the right hand side of the streets are all *even*, as 2 4 6; those on the left all *odd*, as 1 3 5; by means of this clue, a person may always know in what direction he is going.

Omnibuses are the best and cheapest mode of conveyance; they are worked by two companies in correspondence, and are 3d. each, go where you will; one set run north and south, the other east and west, and where these lines intersect each other, there is usually an office, so that if, for instance, you get into a north omnibus, and want to go east or west, they will set you down at the office crossing, where you exchange your ticket, and the right omnibus coming up, takes you without additional expence to your destination.

A map of Paris may be purchased for 5d., and an official Railway Guide (*L'indicateur*) for 2d. It contains all the railways in France; but the main difficulty with an Englishman is distances, which are *Kilometres*, and may be solved thus:—halve the distance, and add the left hand figure or figures, for instance, 60 kilometres, half is 30, add the 6 = 36 miles; or to be exact to an inch, multiply the distance by 5, and divide by 8, as a kilometre is $\frac{5}{8}$ ths of an English mile.

It is needless to point out objects of interest, as these depend upon taste; but there are five flower markets, each held on a different day, and the Jardin des Plantes, which should be visited. All honour to the French gardeners; I have seen many of their gardens, and invariably met with marked civility; may it be the endeavour of their English brethren to reciprocate the feeling. Gardening, in France, has not reached so high a standard as with us; but it is hard if a man cannot meet with some floral production different, if not superior, to what he has seen before; and he should obtain a plant or seeds. Postage is low, and perhaps a connection might be formed for the purpose of mutual exchanges. Lastly; amid the numerous objects in Paris attracting attention, select those which are profitable and useful; make notes of these, for impressions fade. It is doubling the pleasure to be able to live over again among bright ideas and agreeable recollections. In short, unite instruction with pleasure, this gives permanence to enjoyment, and the stock will be improved by the graft.—S. P., *Rushmere*.

SANDWICH ISLANDS.

(Continued from Vol. XIII., page 483.)

"COFFEE.—Coffee is cash, and the demand for it the past year has been much beyond the supply, and that, too, at prices ranging from 12 to 18 cents per pound. The call for Kona coffee, which is said to be inferior to none in the world, is much greater than any other kind, and it is a thousand pities that beautiful district does not send more to market. The only planters of coffee to any extent in the Islands, at the present time, are Messrs. Cummings and Hall, of Kona, Mr. Pitman, of Hilo, and Mr. Titcomb and Messrs. G. Rhodes and Co., of Hanalei, Kauai, all of whom deserve praise, for all have had their trials to overcome, and have battled with them manfully. The greatest producer of coffee is Mr. Titcomb, of Kauai, who is famous for good management and thrift.

"POTATOES.—Two or three years since the largest export from these Islands was that of Irish Potatoes to California, To-day we are eating California Potatoes of a better quality and at a less price than those of our own raising. How shameful! There is no soil in the world better adapted to the raising of this valuable vegetable than the rich mellow loam of Kula, East Maui; and I am happy to hear that the people of that region are beginning to wake up to the importance of raising a supply for our whaling fleet.

"TOBACCO.—The seed of this plant, imported last year by the Society from Cuba and the United States, was to Messrs. Archer and Gruben, of Kauai, and I learn some of it has grown, and gives promise of a good leaf.

"GARDEN VEGETABLES, MELONS, AND FRUITS.—Most of the garden vegetables produced at the Islands are raised at the hot sea side, in a climate and soil not the best adapted to their growth, and, consequently, many of them do not thrive, even with the best of nursing. Tomatoes, radishes, carrots, cucumbers, lettuce, egg-plants, beans, and squashes can be grown in any quantity, with good care; but generally speaking, beets, turnips, onions, parsnips, parsley, peas, cabbage, and many other valuable vegetables, are of a very inferior quality, and require more watching and money than they are worth. Several natives grow vegetables for market on a limited scale; but the only foreigner who has prosecuted the business with much profit is Mr. Montgomery, who has gone into the work *con amore* and with gloves off.

"CATTLE.—It is clear to me the Islands, as a whole, are better adapted to pasturage than to agriculture; and hence the Society cannot devote too much attention to the improvement of our stock. Nearly, if not quite, seven-eighths of all the surface of the group is unfit for the plough, while it yields the sweetest of pasture. There is a marked improvement in the breeds of our cattle within the last few years, and never has there been so much activity and interest manifested in the subject as within the last twelve months. Mr. Thomas Cummins, of Honolulu, has imported a fine bull, half Durham, from California, and orders have been sent to the United States for other cattle, of various breeds. Mr. Wylie, Captain Meek, and myself, have sent for an Ayreshire bull and cow; Captain Meek, Mr. Allen, and myself, for a Durham bull and cow; Dr. Hardy, for a Durham cow; Dr. Wood, Mr. Montgomery, and the Society, for a Devon bull and cow; and Mr. Armstrong, Mr. Reynolds, and Mr. Harris are about to order a Hereford bull and cow; and, I doubt not, there are other orders with which I am not acquainted.

"The subject of salting beef is closely connected with that of cattle, and one which I hope will receive more attention than has hitherto been bestowed upon it. We have plenty of cattle and to spare, and why is it that we allow our market to be supplied in a great degree by salted beef imported from the United States? Some say our salt is not good; others, our climate is too warm, and consequently the beef cannot be cured so as to keep well. As for salt, if ours is not of the requisite quality, the best can readily be imported; and as for climate, we can choose almost such a temperature as we like. The subject of salting beef is one with which I am not familiar, but there are those in our Society who can handle it with ability. I can see the evil, and believe it has a remedy. I take pleasure in laying before you a communication on the subject from Mr. Wylie. We ought to export largely of

both beef and butter; and I believe the time will come when we shall do so.

"HORSES.—The Society has taken no new steps this year for the introduction of horses, owing to the great risk and expense of the business; but has left it entirely to private individuals. Two American mares have been recently imported by Dr. S. P. Ford, from California, and one by Mr. R. H. Bowlin, and Mr. Paul Manini is daily expecting a fine American stallion. Good horses are increasing, but not so fast as poor ones, which in some districts outnumber the cattle, and are a downright nuisance. For valuable suggestions in reference to these miserable nags, and the subject of horses generally, I beg to refer you to the Report of the Committee having that matter in charge.

"SHEEP.—The business of raising sheep has taken a start this year almost equal to that of wheat growing, and is fast acquiring an importance second to no other. It ought to be very profitable, for the price of mutton is high, and the rapidity of increase beyond all precedent. I have known of some flocks that have trebled in the last year, and I hear that Mr. Moffit has one ewe with five lambs; mother and children all doing well. The Merinos imported by Mr. Moffit, and the South-downs by Mr. Cummins, are thriving, I am told, and in a short time we may promise ourselves a large export of good wool, and the luxury of the best mutton. Dr. S. P. Ford, who has entered largely into the business of raising sheep, has now on the way to the islands, in the ship Falcon, four French Merino and two South-down rams, which will infuse into our flocks some fine blood. Mr. Montgomery has also gone extensively into the business, and has ordered from Australia a choice lot of rams, which may be expected to arrive every day. Captain Meek has also ordered some South-downs from Vancouver's Island. The Society has recently received a donation of valuable books from the Hon. B. P. Johnson, Corresponding Secretary of the New York State Agricultural Society, among which is the "American Shepherd," a treatise on the breeding and management of sheep, of high repute. For this and many similar acts of kindness, Mr. Johnson merits our best thanks. While speaking of sheep, I ought not to forget the burr, which is one of the greatest pests in this island, and is fast spreading to Maui and the other islands, being carried hence in the manes and tails of horses that were better dead than alive. I hope the Society and Legislature will take means to prevent the increase of this nuisance."

ORCHARDS, APPLES, AND THE MARKET.

"DAVID, I am going to quit the nursery business. In twenty-one years fruit will be a drug in New-York city. Just look around this neighbourhood! There is deacon Jones has just set out 500 trees; Tom Smith 400, and his brother Jim will have 1000 next spring, and so on at that rate all over the country—grafted fruit, too, none of it for cider. Now what do you suppose is to become of all these apples? I tell you what it is, David, we must wind up the nursery business, or we shall break flat. Everybody will grow it, but nobody will buy it, a few years hence."

This prognostication was made more than twenty years ago, by a sensible man engaged in propagating choice fruits for sale in Central New-York, and no doubt the speaker honestly believed the days of the nurseryman were well nigh numbered. Brother David, however, was of a different opinion. He did not believe it was so easy to over-stock the market with such fruit as no other than American soil and climate can produce. He did not believe 'ere twenty years' time would elapse everybody would have an orchard, the products of which would be so unsaleable, and the business so unprofitable, that the owner could have no desire to plant more, or better, or newer varieties of trees; consequently, he urged that the business should be perseveringly continued until the dawning of the day was more visible in the horizon.

What has been the result? A sale of 40,000 Apple-trees, and 7,000 of other fruits during the planting season of last year, and the prospect for the next equally good. The very men who had planted 500 have increased 1,000, and some of them have doubled that tenfold; and yet the market is now better than it ever was before for all the choice varieties of the product of the orchard, vineyard, or garden. The

market is not yet glutted, nor can it be while millions of mouths continually water for the luscious fruits, which contrast so advantageously with the sour crabs, "five to the pint," which filled the market twenty years ago. The market cannot be glutted with such fruit as the Newtown Pippins, Roxbury Russets, Rhode-Island Greenings, Baldwins, Bellefleur, Swaar, Domine, and a great variety of other excellent winter keeping Apples; while the luxury-loving mouths of old England are within two weeks (we have done counting by miles,) of the fruit-bearing hills of New-England. Nay, not only New-England and New-York, but the ever-bearing trees of the rich plains of that once far away western wild, known in our boyhood as New-Connecticut. But still the market is not glutted, nor will it be, though all Ohio, Michigan, Indiana, Illinois, and Wisconsin, shall pour their golden treasures of Golden Pippins from their unbounded plains of the richest fruit-growing land the world ever saw, while that same world full of people possess the taste they now do for choice delicious fruits.

Our advice, therefore, is, as it has always been, to every man who owns an acre of land—plant trees. Don't be afraid of over-stocking the market with any kind of fruit, except such as your father used to grow, and some of you still perpetuate: because the refined and improved tastes of the world demand, and will have, if it is procurable, the best that can be grown.—*Oswego Journal*.

TO CORRESPONDENTS.

FLOWER-GARDENS (*A Subscriber*, and *Charles Edwards*).—We do not suggest the planting of a whole flower-garden; we merely criticise such plans as are planted already.

JOYCE'S STOVE (*J. R.*).—You will see what is said by a correspondent at page 61. There is no doubt it would throw out enough heat for your small greenhouse, eight feet by ten feet, and seven feet high. We have had no experience of the use of any stove but the one heated by gas.

FOOD FOR FOWLS (*E. N.*).—A quarter-of-a-pint of barley, and the same quantity of meal and pollard, mixed and moistened with water, is a fair average allowance for each full-grown fowl. They having a supply also of green food daily.

THINNING ONIONS (*W. Weekes*).—You cannot thin them *exactly* first to two inches, then to four inches, and then to six inches. When such directions are given, no more is intended than that they should be *about* those distances. If you thin to three inches at your second thinning you will not spoil your crop; and your Onions will be finer if they are finally eight inches apart.

FLEMING'S TREATISE ON THE PINE was published in some gardening periodical, we believe.

DIOSCOREA BATTATAS (*W. B.*).—The address you ask for is "Mr. J. Henderson, Kingskerswell, Devon."

LAUGHING PIGEONS.—A correspondent has applied to us for the address of "An Old Subscriber," who wrote about these Pigeons.

NAMES OF PLANTS (*Argentum*).—Your Verbenais very good, and like *Perfume Madeline*. Your Fungus is one of the *Morels*.

POULTRY SHOWS.

AGRICULTURAL SOCIETY'S (Royal) at Carlisle. July 23rd, and following days. Sec., J. Hudson, Esq., Hanover Square, London.

AIREDALE, at Shipley, 14th of August. Secs., J. Wilkinson, Esq., and J. G. Hyslop, Esq.

BATH AND WEST OF ENGLAND, at Tiverton, 6th, 7th, and 8th of June. Sec., J. Kingsbury, Esq., Hammet Street, Taunton.

BEDFORD. November. Secs., J. T. R. Allen, Esq., and F. A. Lavender, Esq.

BIRMINGHAM. 11th to 14th of December. Sec., J. Morgan, jun., Esq.

DEWSBURY. 24th August. Secs., R. R. Nelson, Esq., and J. Newcome, Esq.

DORCHESTER. 24th and 25th of October. Sec., J. G. Andrews, Esq.

DURHAM AND NORTH YORKSHIRE, at Darlington, 6th and 7th of December. Sec., J. Hodgson, Esq.

HEXHAM. 14th and 15th of May. Secs., Mr. W. Turner, Hexham, and Mr. J. Bell, High Shield.

NOTTINGHAMSHIRE, at Southwell, 19th and 20th of December. Sec., R. Hawksley, jun., Esq., Southwell.


PARIS. June 1st to 9th. Application to be made to the Minister of Agriculture.

WINDSOR. 27th, 28th, and 29th of June. Secs., T. Chamberlain, Esq., and H. Thompson, Esq., Thames Street, Windsor.

N.B.—Secretaries will oblige us by sending early copies of their lists.

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WEEKLY CALENDAR.

MAY 15—21, 1855.			WEATHER NEAR LONDON IN 1853.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day of Year.
D M	D W		Barometer.	Thermo.	Wind.	Rain in Inches.						
15	Tu	Elater sputator.	30.120—30.097	66—43	N.	—	11 a 4	42 a 7	3 52	29	3 54	135
16	W	Elater minutus.	30.136—30.125	61—30	N.E.	—	9	43	sets.		3 53	136
17	Th	ASCENSION. HOLY THURSDAY.	30.163—30.032	69—40	N.E.	—	8	45	9 a 55	1	3 52	137
18	F	Elater marginatus.	30.140—30.040	56—30	N.E.	01	6	46	11 1	2	3 51	138
19	S	Elater unicolor.	30.229—30.199	64—30	N.E.	—	5	47	11 53	3	3 48	139
20	SUN	SUNDAY AFTER ASCENSION.	30.162—29.989	71—41	S.	07	4	49	morn.	4	3 46	140
21	M	Sun's declination, 20° 8' N.	29.884—29.706	64—47	S.	19	2	50	0 33	5	3 42	141

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 65.5°, and 43.5°, respectively. The greatest heat, 86°, occurred on the 17th, in 1833; and the lowest cold, 25°, on the 15th, in 1650. During the period 119 days were fine, and on 77 rain fell.

THE floral campaign for the summer season amongst the leading Societies may be considered to have been fairly opened last week at Cheltenham, where, on the 2nd instant, they were favoured with a fine day, spirited exhibitors, highly respectable productions, and a good company.

The season is late, very late, and even when it is much more forward, the ineligibility of shows so early in the month made it a matter of some doubt how far exhibitors would be able to respond to the invitations of the Society's Schedules; but the display, upon the whole, was sufficient to warrant the expectation of very brilliant exhibitions in both of the great London arenas.

We give the Cheltenham Society a place in the first rank, because, in all matters, its originators, promoters, and managers, have had first class objects in view; they have aimed at furthering them only upon the most enlightened principles, and the results have fully borne out the soundness of their whole course of proceeding.

The great bar to success in all provincial efforts of the kind is that they are originated and managed by the intending exhibitors in the neighbourhood in which they are established. The competition is limited to a small district, and the prize list is, in many cases, arranged to suit the powers and possible productions of the members of the committee. Now, we hold that any given sum of money, to whatever purpose devoted, ought to be so expended as to produce the most satisfactory results. The committees of such societies receive, in trust, the money of their subscribers, and the admission money of their visitors; and the honest duties they owe to them are twofold. The encouragement of progress, with regard to horticulture in the neighbourhood; and the bringing together the largest amount of entertaining attraction. We think it will be patent that neither of these objects can be accomplished to the extent they ought to be by any narrow-minded exclusiveness. If the activity of horticulturists is to be stimulated by competition, it must be not only amongst the growers of a neighbourhood, but they must have the spur applied, by allowing those of other localities to place their productions alongside of them. Even then, the grower in the neighbourhood has considerable natural advantages over his competitor from a distance. Then, with regard to the attraction, its extent, and the pleasure it will afford—if the prizes a society is enabled to offer are sufficient to induce competitors to bring, their plants and flowers from a distance, for the chance

of a prize,—the subscribers and the visitors have an undoubted right to the increased display which may thereby be afforded to them.

We feel much pleasure in pointing out the Cheltenham Society as an example to other provincial Societies. It began, some four or five years ago, by advertising for a prize schedule, offering two handsome premiums; they encouraged competitors from all parts of the country by facilitating arrangements with the railway companies, as well as by offering noble prizes; and they ensure sound and satisfactory verdicts by selecting from the best of the London censors.

THE necessarily high price of books on science is one of the most powerful obstacles in the way of the naturalist who wishes to keep pace with the progress of the science to which he is devoted. The price of such books is necessarily high, even if they are not illustrated with drawings, because the number of purchasers are few. A publisher can afford to sell for a shilling a volume of which he can sell ten thousand copies; whereas, if he can sell only five hundred copies, ten shillings would be barely a remunerative price.

On this account we always welcome, with especial pleasure, any publication having for its object a remedy of which the naturalist may avail himself for the high price of books, and such a remedy is *The Entomologist's Annual for 1855*.* We recommend it most strongly, for it is full of information valuable to the young student as well as to the adept in Entomology, and the names of the writers are a guarantee that the information is correct. As a specimen of what the mere learner will find useful, we quote the following.

HOW TO REAR LEPIDOPTERA FROM THE PUPA OR LARVA STATE.

“To rear pupæ collected is comparatively an easy matter. The collector should take with him a box (filled with moss) in which to convey the pupæ, and when brought home they should be placed in a large box, with the inside surface rough, and covered with gauze or wire frame; at the bottom of the box should be some fine earth, on which the pupæ are to be placed and covered with a thick layer of moss, which may or

* The Entomologist's Annual for 1855, comprising notices of the new British Insects detected in 1854. *Lepidoptera* by the Editor. *Hymenoptera* by F. Smith. *Coleoptera* by E. W. Janson. Edited by H. T. Stainton. Second Edition, with considerable additions, including instructions for collecting, preserving, and arranging insects, &c. J. Van Voorst, Paternoster Row. 1855. Price 2s. 6d.

may not be occasionally damped. *Be sure to keep them from the sun.* So writes Mr. Greene.

"To rear larvæ requires considerable care and attention: the larva must be kept well supplied with fresh food; if its food is allowed to become withered and mouldy, the larva cannot be expected to retain its health. The plan used by Mr. Doubleday of Epping, our most successful rearer of insects, is, to get a glass cylinder and sink one end of it into a flower pot in which is some white sand, the sand is kept moist, and the food is stuck into it, so as to keep it fresh for some time; the larva is then placed on its food, a bit of gauze is tied over the top of the cylinder, and the flower-pot and cylinder being kept out-of-doors, the larva is as nearly as possible in a state of nature, and no doubt larvæ are quite of Mr. Squeers' opinion, that 'it is a blessed thing to be in a state of nature.'

HOW TO KILL LEPIDOPTERA.

"The modes of killing in use among collectors are very various; some use prussic acid, some use chloroform; bruised laurel leaves is a convenient way of obtaining the effects of the former poison, without placing anything dangerous in the hands of young people. The receipt for preparing them is as under.

"Gather one hundred laurel leaves, the juiciest you can find (yet they must on no account be wet when gathered); take two or three at a time, and then hammer them till they are well bruised; then with a pair of scissors cut them into small pieces—as small as you like, and place them in an air-tight vessel, so secured by some contrivance that the pieces shall not roll about loose.

"For large moths and sphinges it is necessary to use a more violent poison, and a quill dipped in saturated solution of oxalic acid should be inserted beneath the thorax of the insect, by which means the largest species may be killed almost instantly. Those who want an off-hand way of killing insects, when neither acids, laurel leaves, or chloroform are at hand, will find, that by burning one or two brimstone matches under an inverted tumbler, beneath which the insects to be killed have to be placed, and leaving the inverted tumbler full of sulphureous fumes for a few minutes, the insects will be completely killed, but green moths will be liable to lose their colour.

HOW TO PIN LEPIDOPTERA.

"In the first place, the collector must supply himself with solid-headed pins, which he may obtain of W. Gale, Crown Court, Cheapside, London; they are sold in half ounce boxes, and Entomologists in the country can have them forwarded by post.

The proper sizes to order are	No. 6 for Sphinges and Bombyces.
" " "	No. 8 for Noctuæ.
" " "	No. 8 and No. 10 for Geometræ.
" " "	Nos. 19 and 20 for Micro-Lepidoptera.

"The pin must be inserted in the centre of the thorax, and held as nearly as possible vertical, if anything, with the point rather inclining backwards; many collectors hold them with the point inclining forwards, which gives the insect, when set, rather a silly appearance: the pin should be pushed well through the insect, so as to take firm hold of the cork, about one-third of an inch, at least, projecting beneath the thorax of the insect.

HOW TO SET LEPIDOPTERA.

"The variety of apparatus that has been invented for this purpose would be rather puzzling to a beginner. Grooved and rounded corks are used by many for setting the *Noctuæ* and *Geometridæ* upon, and those who have seen such contrivances can imitate them, but to explain them accurately by description would be

difficult. For those who have not such contrivances, we therefore recommend a sheet of prepared cork, which should be glued on to a flat piece of wood, so as to keep it steady and prevent it from warping; then cut some braces of thick card-board of various lengths, from three-fourths of an inch to two inches, tapering nearly to a point at one end, the other end being about one-fourth of an inch broad; insert on the brace at this broad end a good strong pin (I obtain of Mr. Gale a No. 12 pin, which answers this purpose), and when about to set out an insect—say a *Vanessa Urticæ* or an *Arctia Caja*—place two of the longest braces about an inch apart, with their points converging, and let the broad end of the brace be kept well up from the board being some height up the pin, the narrow end being in contact or nearly so with the setting-board; these are the *under braces*, and the insect is then to be placed midway between them, and its wings expanded over these braces, and kept in their place by the use of smaller braces. The insect may thus be made to assume a rounded form, that is to say, the edges of all the wings are deflected so as just to touch the setting board; it gives the insect a graceful, pleasing appearance, but surely not a natural one. On the Continent, insects are always set on flat setting boards, with a groove to adjust the body, so that by applying flat braces over the wings they are easily kept perfectly flat and horizontal. The same plan is adopted here by many collectors of *Micro-Lepidoptera*, and in many genera is absolutely essential, or the collector must despair of having his specimens named, as the characters frequently lie in the very tip of the cilia. Insects should be left on the setting board from one to four days, according to the size of the species and the dryness of the weather.

"In summer, care must be taken to exclude mites from the setting boards, or they will infallibly destroy all the best species; keeping a good supply of camphor will not always be found sufficient on the setting boards, which are of necessity exposed to the air, but a mixture of equal parts of oil of thyme, oil of anise, and spirits of wine, spread over the setting board, and laid on the *grooves* more especially, will be found of greater effect than camphor."

Of what the older entomologists will be glad to find collected annually in a volume, the following is an example.

"*ROSLERSTAMMIA PRONUBELIA*, W.V.; a single specimen of this very conspicuous species was taken at Sutherlandshire, in May last, by Mr. Buxton; its capture is recorded in the *Zoologist*, page 4437. The insect is very rare on the Continent; and though known to the authors of the *Wiener Verzeichniss*, and *Fabricius* who mis-spells it *promulella*, it had been quite lost sight of by later authors (unless we except Hübner, whose figure, it is most charitable to suppose, was made from a description, form and colour both being so excessively faulty), till lately it has been noticed by Herrich-Schäffer and Reutti. The extraordinary way in which some species seem entirely to disappear, and then, after a lapse of many years, simultaneously turn up in many distant localities, is one of the great marvels of Entomology.

"*Alis anticis viridi-aureis, costa ipsa in medio dilute lutea; alis posticis dilute luteis griseo-fimbriatis.* Exp. al. $6\frac{1}{2}$ lin.

"Head dark yellow, in front deep purple. Face and palpi pale yellow. Antennæ dark fuscous, a short space before the apex white. Anterior wings shining golden green, darkest towards the base near the costa; the costa, from a little before the middle to beyond the middle, is pale yellowish; cilia pale greyish bronze. *Posterior wings pale yellowish, with all the margins rather dark fuscous, darkest*

towards the apex: cilia pale grey. Posterior legs pale yellowish white.

"*COLEOPHORA LIMOSIPENNELLA*, F. v. R.; bred this summer from 'elm leaves, picked at Sutton, with the large *Coleophora* of the elm (*limosipennella*?)' (Ent. Comp. 127); and also from similar larvæ on alder, thus noticed in Ent. Comp. 133: 'Aug. 23rd, T. B. sent me two *Coleophora* larvæ from alder, the cases similar to those of *C. limosipennella*?' In July, 1854, I collected the larvæ very plentifully on elms, near the Bee-hive at Burford Bridge. The species in the perfect state closely resembles *C. badiipennella*, but is larger and darker, and the whitish apex of the antennæ is generally unannulated. The case of the larva is very different.

"*Alis anticis saturate brunneo-ochreis, costa anguste albida, postice ochrea; antennis albis, fusco-annulatis, articulo basali ochreo, non penicillato.* Exp. al. 5—6 lin.

"Head, face and palpi pale ochreous. Antennæ white, annulated with fuscous; the basal joint pale ochreous, hardly as robust as in *badiipennella*; the extreme apex is frequently entirely whitish, without annulations. Anterior wings dark brownish-ochreous, the costa narrowly whitish to beyond the middle (*yet more broadly and less sharply margined than in badiipennella*); cilia ochreous, inclining to fuscous towards the anal angle. Posterior wings greyish fuscous, cilia rather darker."

THE BRITISH POMOLOGICAL SOCIETY held its usual monthly meeting at the Rooms, 20, Bedford-street, Covent Garden, on the 8th inst. Mr. Davidson in the chair.

The Secretary reported that he had received a cheque for ten guineas, from Sir Joseph Paxton, as a donation to the funds of the Society; and it was unanimously agreed that the thanks of the Society be given to Sir Joseph for his very handsome donation, and that the same be engrossed on the minutes.

The Secretary also reported that he had received grafts of two varieties of Apples, and of three varieties of seedling Plums, from Dr. Davies, of Pershore, for distribution amongst the members, and that he had forwarded them to Messrs. McEwen, of Arundel Castle; Bradley, of Somerleyton Hall; Saul, of Stourton Park; Rivers, of Sawbridgeworth, and Adams, of Brentford.

Mr. Snow, gardener to Earl De Grey, presented a collection of thirteen varieties of Apples in a very high state of preservation; among which were remarkably fine and handsome examples of *Blenheim Pippin*, as sound and firm as in November; the old *Cockle Pippin*, though small, was very fine; *Scarlet Nonpareil*, remarkably firm, and very highly flavoured; *Sykehouse Russet*, also in very great perfection, both as regards condition and flavour; the *Ribston Pippins*, *Golden Russets*, *Dumelow's Seedlings*, and *Bedfordshire Foundlings*, were also as plump and sound as the day they were gathered from the tree; and what surprised us most of all, was to see such specimens of *Cellini* at this season of the year looking as fresh as it was possible for them to be. This collection reflected great credit on Mr. Snow, as showing that he knows not only how to grow fruit, but also how to keep it when he has harvested it. We think there is quite as much merit in keeping fruit in the state in which this collection was so late in the season, as there is in all the art of cultivation.

Mr. Dickens, of Peterston, near Ross, sent a collection of fruit without names, which were far advanced in decay, and could not, therefore, be serviceable for the purposes of the Society.

The following members were elected:—

H. T. Hope, Esq., The Deepdene, near Dorking.

H. G. Bohn, Esq., York-street, Covent Garden.

M. G. Thoyts, Esq., Sulhamstead.

Mr. George Lee, Clevedon, Bristol.

A GLANCE AT OUR FRUITS, VEGETABLES, &c.

I HAVE often, in these pages, urged the benefits arising from an artificial retardation of the blossoming period in fruits, and this season seems destined to show, *naturally*, what the value of the principle may be.

I felt very much gratified, perhaps flattered, to find lately, in the columns of a contemporary work, a commendation of the practice from no less a person than Mr. Bailey, of Nuneham, who is so well known in the gardening world, and than whom no person is more competent to duly estimate the value of disputed points in Horticulture.

Now, Mr. Bailey has the very singular property, in these times, of being ingenuous and honest, for he cheerfully accords to me the earliest suggestions as to this course of practice.

I may here observe, that although, as everybody must know, the blooming period, as to most of our fruits, is at least three weeks later than in ordinary seasons, yet, that I have just as strenuously retarded my fruits, thus, at least, proving, that I have an increased faith in the practice, and that I have signed no act of recantation in this affair. Here I may indulge in a few remarks on the present character of fruits, as to the blooming season. Of course, I can do little more than state facts connected with the district where I live, but I must say, that I have certainly never known so great a display of bloom; aye, and the healthiest blossom I ever saw. Take hold of which kind I may, there is calyx, corolla, pistil, and stamens, all perfection, with the utmost freedom of development. But how different have we known these things. I know not how other persons may feel on this head, neither can I imagine what may be their impressions, but I must, in freely offering mine, observe, that I am more than ever impressed with the vast influence that light exercises on those buds of fruit-trees, which Nature herself has so framed as to be in a position to be convertible into either blossoms or shoots.

During last summer I left no stone unturned, as to pinching, dubbing, thinning, &c., all wild or superfluous shoots on my trees, and to this, and the fructifying influences of a most genial summer, fraught with a considerable amount of solar heat and light, I attribute, without hesitation, the excellent prospects of the coming summer.

And, now, let me advise, once more, all that have to do with our notoriously fickle climate, to follow out such principles during the following spring and summer as will enable the trees to perfect their buds; this, as our readers should know, consists in early and careful disbuddings, thinning-out, and stopping, or pinching. The disbudding season has already arrived, and for my own part, every trained tree here shall undergo this process, which may be performed at thrice; let us say the beginning of May, the middle, and the first week in June.

Our annual visitation of the Aphides, Red Spider, &c., is at hand, if they have not already commenced operations; and here let me impress on the minds of our

readers the absolute necessity for immediate attention to those trees infested. I have already cleansed my Peaches and Nectarines; indeed, it was carried out in the last week of April, and such a sight as my Peach-wall is now I have never before witnessed in this way. Every brick of the wall occupied by the trees covered with the most healthy shoots, and clothed on every twig with fruit, for it appears as if almost every blossom had set. The wood, too, from end to end, as even, in point of strength, as if it had been moulded. I boldly affirm, there is not an insect or a curled leaf on a wall 240 feet in length, and this, too, in a garden where, twenty-seven years since, on taking to its management, I was gravely told by an authority, that it was of no use purchasing and planting Peach and Nectarine trees, for the said authority had been on the spot thirty years, and had known them repeatedly renewed, but that they always "went off" about the third year. I name this, to show how nonsensical such assertions generally are, and in order to encourage those who have got stuck in such a "slough of despond," to bestir themselves, and lay by their cowardice.

This has been such a drougthy April, and still continues so dry, that I fear we shall hear of stunted growths in fruit-trees, blossoms stingily developed, and a great tendency to Red Spider and other insect enemies. Let me here remind young gardeners of the immense benefits derivable from the application of mulch to either newly-planted plants, those in very shallow soils, and those in poor or exhausted soils. My practice is, to take each of these cases fully into consideration during severe spring droughts, and the beginning of May is, in my opinion, the most eligible time to carry out such operations. I would by no means advise an earlier application of the mulch; we have all been in error as to this through one-half our days. Whatever folks may think about what we gardeners term bottom-heat, whether as being philosophically nice, or as "straw splitting," it is, nevertheless, as the late lamented Mr. Hume was wont to say, "a great fact."

A man may, on planting a Peach or a Pear in December, say—"I will mulch this tree, or a severe frost may penetrate this loose soil and injure the roots." Well, for the sake of illustration, let us grant him his postulate; but then, what will keep out cold will keep out heat; or rather, to be more philosophically correct, what will keep in heat will keep out heat!

But let us be more plain, and come to the point, for I by no means claim infallibility in the correctness of my view, and, therefore, submit it. To mulch a newly-planted tree in November or December, where soil is loose, and easily permeable by any atmospheric agency, will, I grant, help to ward off sudden extremes. But this proceeding will also prove a barrier to the free admission of the solar influences, when, on the return of warm weather, the earth seeks to regain that of which she has been robbed. My practice is to heap a good deal of mere soil about young and newly-planted trees in the beginning of winter; this I fill up in a sort of conical form. On the return of spring, say in the middle of March, I draw away the superfluous soil, and thinly form a sort of basin all round the fruit-tree, about half-a-yard away from it all round. This serves to retain any spring watering that may be needed, and, as before observed, as soon as I think the soil has received warmth enough from the sun, I mulch on the surface of this basin.

For the moment, I must have done with fruits, and must beg to say something about vegetables, as bearing on the past terrible winter.

The protection of tender vegetables, by means of litter of any kind, has been frequently urged in these pages; and now we have a case in point, it may be well to endeavour to draw attention to it as a warning note

for ensuing winters. Just before the period when our clever friend, Mr. Beaton, turned weather prophet, and with what success all the world knows, I had taken a fit of jealousy as to the probability of a severe trial. I, therefore, scraped together all rough litter of whatever kind, and had everything in the kitchen-garden here covered as far as my materials would reach. I thus managed to cover lightly Brocolis, Coleworts, Celery, and a few other things, for which the cook or the butler are for ever ringing the bell. As for Brocolis, knowing, by long experience, their great value in the kitchen after a hard winter, I not only strewed this coarse litter over them, but also loaded the old litter with old Pea stakes, for fear of the wind baffling my proceedings. I indeed had a presentiment of what is called, "a run of bad weather," but how I came by it I cannot say; certainly it was not through my good friend Beaton's prophecy. If I were to accept almanack weather from any hands, it really would be from his; but, unluckily, the almanack bump is not to be found on my cranium. But now, as to the results. I never was better off for vegetables, of nearly all kinds, during the thirty-four years that I have been a head-gardener. I have plenty of Brocolis, plenty of Coleworts, Green Kale, Cabbaging Kale, Brussels Sprouts, Savoy Coleworts, Branching Brocoli, Spinach, and everything else but Parsley; here I omitted to cover. As for Asparagus, but that is forced, I have never been one week without since the middle of last November; Sea-kale, of course, and the other in-doors things.

Now, I happen to know, that at two of the largest establishments within thirty or forty miles of this place, they have not only lost all their Brocolis, but have scarcely a Green Kale or Cabbage.

So much for protection, not political, not of fruits, but even of culinary matters. R. ERRINGTON.

MEETING OF THE HORTICULTURAL SOCIETY.—MAY 8th.

THIS was the largest and best meeting which the Society ever had in Regent Street, and an extra room on the ground floor had to be thrown open for the first contributions from Mrs. Lawrence for the last two years; but, unfortunately, her plants came in too late by two-hours-and-a-half for the present rules laid down by the judges, and her collections could not, therefore, be entered in competition.

We rejoice to hear that Mrs. Lawrence's health has much improved. She is now building more new "hothouses;" and they say, she will enter the lists again in a year or two, if not this season, to "handsel" the Crystal Palace show in June.

The exhibition was very well balanced; the Azaleas, the new Rhododendrons, the greenhouse plants, the Geraniums, Cinerarias, Pansies, and Auriculas in pots, Orchids, specimens and novelties were all in due proportions, and, with the exception of "rare or new plants," for which allowance should be made for want of time, they were all in the highest state of cultivation and training. The vegetables and fruit were few; but the former were much better than we ever had them at this season. The May exhibition at the Regent's Park, on the morrow, was predicted to cast a shade on this meeting; and if it is true that events cast a shadow before them, this show at the Regent's Park will be one of the best they ever had in May.

HEDAROMA TULIPIFERA.

The rarest and best new plant at this meeting came from the Messrs. Backhouse, of York; there were two beautiful plants of it in full bloom. It is a hardy green-

house plant, from Western Australia, called *Hedaroma tulipifera* alias *Genetyllis*; but, as we were told in the lecture, "*Hedaroma* is, probably, more correct." The leaves of this fine plant look like those of *Pimelia decussata*, but are not so thickly set. The growth is very like that of an *Epacris*, and the tulip-shaped flowers hang down, and are of the same size as the flowers of the common *Fritillaria* "inverted Tulips," in fact, and as gay as any Tulip you ever saw. The colours are a snow-white ground, three-parts covered with the richest crimson and scarlet, in flakes and streaks of delicate tracery, not deeply blotched, as you see common Tulips. The plant is not at all scarce. Mr. Low, of Clapton, sent it out, all over the country, from Drummond's seeds; and Mr. Backhouse, I believe, gathered seed of it himself in Australia. Messrs. Garaway and Co., of Bristol, sent a plant of it to the last meeting at Chiswick, but by strong forcing to get the flowers open in time the colours were bleached out. I have heard, however, that it is now as gay at Bristol as we had it in Regent Street. Every one who grows an *Epacris* ought to have it, and to give it much about the treatment of the best *Epacris*, but never to force it on any account whatever. *Hedaroma tulipifera* was as much admired as any new plant I ever saw under such ordeal, and what everybody says must be true.

GERANIUMS, OR LARGE PELARGONIUMS.

There were two collections of these from Mr. Turner, of Slough, and Mr. Dobson, of Isleworth, two of the most celebrated growers of them in the world; but they did not come into competition this time, Mr. Dobson's plants being in No. 16 pots, while those from Mr. Turner were only in small 32's, making up the most astonishing feat yet accomplished in growing Geraniums. The plants in these small pots produced each from twenty to thirty trusses of large flowers; the leaves hung over the pots, and the growth was as strong as is usual for the kinds, which run as follows:—*Governor General*, the brightest and best scarlet of this lot; *Petruchio*, a darker sort, which was all but new last year, and of which it was then predicted that it would follow *Magnet* to Covent Garden market; *Rosamond*, *Lucy*, *Pandora*, very dark at the back; and *Medora*, all well-known sorts of first-rate merit as show plants. Mr. Dobson had *Delicatum*, his best white; *Harriet* and *Arethusa*, twin sisters; *Eugenie*, a scarlet, which rolls back the petals too much; *Rosamond*, very gay; and *Vulcan*, the same, all very large plants, and as full of bloom as if it were a month later.

FANCY GERANIUMS.

There were two collections of them, but not of the best kinds. One from J. Allnutt, Esq., of Clapham Common, consisting of *Fairy Queen* and *Bride*, the two brightest in this collection; *Queen of the Gipsies* and *Cleopatra*, inclining to the *Jehu* breed; and *Richard Cobden*, with *Darling*, falling more into the strain of the *Hero of Surrey*; but nothing "goes down" now in fancies but pure white, clear scarlet, and purple-crimson.

The second collection was from Mr. Todman, gardener to Mrs. Buckmaster; beginning with the brightest of them, *Delight*, *Perfection*, and *Triumph*; then *Richard Cobden*, *Defiance*, and *Cleopatra*; all of them well grown and bloomed.

Mr. Dennis, of the King's Road, Chelsea, sent six plants of a new forcing seedling Geranium, called *Alma*, for which I predict the same "run" as *Alba multiflora*, on the very first acquaintance. Although I shall never be a good florist, I shall not yield to any one in my estimation of bedding and forcing Geraniums. I never saw Mr. Dennis, that I am aware of, but the moment he announced his *Lady Mary Fox*, I sent for a half-dozen of it; and if I was now in harness, I would recommend

another half-dozen of *Alma*, and would have them, too, to put them into forcing by next Christmas, and to try in a bed in the flower-garden the following summer. It is of the same strain as *Rouge et Noir*, but larger in all the parts, or with the size and constitution of the *Queen of Roses*. *Touchstone* and *Rouge et Noir* are the only two we have of that strain for beds, and both are barren. Perhaps Dennis's *Alma* is a breeder, and if so, the gate is opened again for breeders in this class.

AZALEAS.

Mr. Grix, gardener to A. Palmer, Esq., Cheam Park, sent four magnificent specimen plants of Chinese Azaleas; one of which, a clear white, called *Bianca*, was one sheet of bloom, without a leaf being seen. We none of us ever saw finer bloomed Azaleas; and Mr. Veitch sent two match plants of the white *Azalea indica*, six feet high, equally good, and the best shaped plants ever exhibited, the shape being a blunt pyramid.

Mr. Frost, of the Dropmore Gardens, sent half-a-dozen new and very superior seedlings of his own. The names are, *Beauty of Dropmore*, a large, crimson flower, richly spotted with black on the upper petals; *Miltonii*, a fine, round-shaped flower of a pink colour, well dotted on the upper petal; *Duke of Cambridge*, orange-red, and well spotted; *Prince of Wales*, light rose, large, and spotted; *Alba magnifica*, a superb white, and *Kistellii*, a double, pink flower.

Messrs. Standish and Noble sent a fine specimen of the *Azalea amœna*, with a clear stem a foot long, and a head nearly a yard across, covered with hundreds "hose in hose" like blossoms of a bright rosy-purple. This gem will be found in my spring reports three years since as one of the first water. It is now proved to be quite hardy, and ought to be in every collection; half-a-crown or three shillings would buy a nice plant of it; also *Bealii*, which might be called the Chinaman's *Variiegata*, and *Narcissiflora*, a clear white flower, with a double row of petals of equal length.

The Messrs. Rollison, of Tooting, sent a collection of three Azaleas, *Alba superba*, *pallida*, and *magnifica pleno*, in full bloom; and Mr. Todman sent a similar lot, *Perryana*, *Iveryana*, and *Extranea*, all good, and well-bloomed.

HOVEA CELSII.

There was another example of getting over a great difficulty, a large, old bush, and a very bushy plant, of *Hovea Celsii*, from J. Allnutt, Esq.; it stood four feet high, and was more than three feet through. This plant was cut down to near the surface of the pot many times, and the root-stock put one in mind of such knobs in old coral plants, *Erythrina Cresta-galli*. Mrs. Lawrence had also a good, young specimen of this *Hovea*, which tries one's temper as much as any of the pea-flowering plants.

The secret seems to be, to cut down the plant just as it is going out of flower, as soon as it begins to get straggly, or bare at the bottom, and to repeat the close-cutting as often as the plant gets bare below, or oftener; the *Erythrina*, out against a wall, is so cut every year, and is much improved by it; and who can assert that the *Hovea Celsii* would not do equally well by a yearly cutting down. If I had the chance now, I would certainly try the experiment.

SOCIETY'S PLANTS.

From the garden of the Society were *Rhododendron Edgeworthiana*, a large, clear white, sweet-scented flower, from the Sikkim Himalayas. *Berberis Wallichii*, with longer leaves and stouter growth than *Darwinii*, and with flowers much in the way of Darwin's *Berberis*. A

very nice thing, *Schizanthus violaceus*, which looks almost too dark in summer, but is now of a lighter and far better colour. All the tribe come in useful, when sown in the autumn, and wintered in pots and shelter. *Dielytra spectabilis*; the double white *Prunus sinensis*, quite hardy, but an excellent pot-plant to force thus early, and much earlier; *Rhododendron formosum*, with large, white, waxy flowers, which look like those of the white *Azalea indica*; *Rhododendron Theaeflora*, a mottled thing of no great "account;" *Calceolaria violacea*, a real curiosity in its way; not at all like our *Calceolarias*, but a different shape altogether; a profuse bloomer, and lasts a long time; *Salvia gesneriflora*, as big as a moderate *Laurustinus*; the finest thing among all the crimson *Salvias*; *Acacia grandis*, six feet high; a fine plant; *Clematis bicolor monstrosa*, and a large plant of *Forsythia viridissima*, which they winter in a cold pit, to save the beauty of the flowers.

ORCHIDS.

The Messrs. Rollison sent a new *Dendrobium*, or, at least, very scarce one, a very dwarf plant, with short spikes of pale yellow flowers, called *cymbidioides*; a strong *Huntleyana cerina*, equally rare, with large primrose-coloured flowers, and with a dark streaked eye; a fine large *Cattleya Mossiæ*, from Mr. Maher, gardener to J. M. Strachan, Esq., of Teddington Grove, who was chairman of the meeting. A rare *Cattleya inathina*, from the Messrs. Backhouse; this has pale flowers with a lilac fringe on the lip. Mrs. Lawrence sent a magnificent *Dendrobium nobile*; a fine large *Phaius Wallichii*, *Chysis bratescens*, *Phalænopsis grandiflora*, *Aerides virescens*, and *Epidendrum macrochilum*.

MISCELLANEOUS.

Mrs. Lawrence sent a collection of greenhouse plants, of which *Eriostemon intermedium* is perhaps the finest in the country; *Chorozema Lawrenceana*, *Boronia serrulata*, *Oxylobium Pultenææ*, and the *Hovea Celsii* mentioned above; all very good plants. A little plant of *Tetralthea ericoides*, which one seldom sees, from the Messrs. Rollison, was much admired by the ladies for its profusion of rosy-lilac blossoms on a heath-like plant. Mr. Chandler, of Vauxhall, sent a collection of three *Azaleas*, *Rhynchospermum jasminoides*, *Deutzia gracilis*, *Oxylobium Pultenææ*, with large heads of yellow pea-flowers. There was a large specimen of *Erica ventricosa*, from Mr. Todman; a very large *Statice Holdfordi*, from Mr. Cutbush, of Highgate; a white and striped *Camellia*, from Mr. Gaines, of Battersea; three beautiful cross-seedling *Cactus (Epiphyllum)*, from Mr. Robbins, gardener to W. Beach, Esq., Akly Hall, Basingstoke; a fine spotted Belgian *Rhododendron* called *Prince de Rohan*, from Mr. Veitch; a *Rhododendron Edgeworthii*, from C. B. Warner, Esq., Stratford Green; three *Azaleas*, from Mr. Gaines; and a specimen plant, with some little ones, of *Weinmannia tricosperma*, from Messrs. Standish and Noble; this is the finest of our fine "five-leaved plants," and is described in my notes of last summer. They also sent *Rhododendron glaucum*, which is not much, the flowers being nearly of the colour of a pale *Weigelia rosea*.

Mr. Henderson, of Pine-Apple Place sent a full collection of *Eriostemons*, and, really, to see them all in bloom together, and in such fine order, was a fine sight. They stood thus, *liniarifolium*, *neriifolium*, *scabrum*, *buxifolium*, *intermedium*, and *myoporoides*; with these were *Oxylobium Pultenææ*, six little *Tremandra ericoides*, alias *Tetralthea ericoides*, in a mossed basket, and an *Eliocarpus reticulata*, with numerous spikes of little, white, bell-like flowers, much fringed on the drooping edges; a nice plant; all in the old Pine-Apple Place style of growth, and very healthy.

The Messrs. Henderson, of the Wellington Nursery, sent a collection, in which was conspicuous *Rhododendron Dalhousiana*, a noble, or rather a most noble, creamy-white flower, like some Lily; there were six flowers open in one head, and two more coming; in the damp woods of Sikkim this magnificent plant grows on trees, like an air plant; but in our, comparatively, very dry climate, it grows in peat, like the rest of them; the leaves are more after those of the old tree *Rhododendron* than are most of these Sikkim ones; *Rhododendron Edgeworthii* making the third of it at this meeting, and none of them well grown; but then, the novelty of seeing such magnificent flowers as no one ever dreamed of, in the genus, till Dr. J. Hooker's work on them appeared, put all the arts of good cultivation out of the question, in forcing the seedlings into premature flowering. Many shook their heads at the drawings in Dr. Hooker's book, who may now shake hands with him on his grand discovery of such noble flowers, in a part of the world which none of them ever heard about till they read of it in his book. A fine crimson seedling *Azalea*; two cross seedling *Heaths*; a half-red half-white mottled *Azalea*, called *Beauty of Europe*; a *Begonia picta*, under a bell-glass; a *Genetyllis macrostegra*, with drooping dark-red flowers, and some others.

By way of anticipation, or "letting the cat out of the bag," there will be a display of *Rhododendrons* at the first May meeting of the Society, at Gore House; an *Edgeworthii*, with twenty heads of bloom, and a *Dalhousiana*, with six heads, at least—what a sight! There were six kinds of *Mimuluses*, in twenty-four pots, from Mr. Cutbush, but not very distinct sorts.

PANSIES.

Mr. Turner had twelve kinds of *Pansies* in pots, and, better than ever, they were seen in open borders. I could run away with *Ophir* and *Sovereign* to plant a yellow bed—they are splendid yellows. *Duke of Perth* struck me as the best dark, and *Comet* as the best "fancy;" but, in truth, I know very little about them.

Mr. Dobson had another dozen in pots, nearly as good; and Mr. Bragg, of Slow, had another dozen pots as good as that. What a change from the halfpenny *flips* we used to see pasted on something to keep them from shrivelling up by the sun, and to make believe they were "round" flowers; now, the highest ladies in the land find pleasure and interest in scanning them.

AURICULAS.

Mr. Turner sent a still greater variety—twelve pots of best florist Auriculas. Here I was still farther from home, but I could not help admiring them; the green-edged ones were more numerous than others, and there was a black one, with a large white eye, called *Oxonian*; *Ringleader*, green; *Lovely Ann*, green; *Lady Jane Grey*, purple and white; *Duke of Cambridge*, purple and green; *Ne plus Ultra*, green; *Lancashire Hero*, green; *Superb*, green; *Attraction*, dark; *Smiling Beauty*, light-edged; *Lady A. Wilbraham* and *Prince of Wales*, both green.

CINERARIAS.

Mr. Turner's Cinerarias were nearly the same sorts as he had at the last meeting. *Lady Paxton*, white, with a lilac edge, and *Etoile de Vaise*, white eye and purple edge, being the only additions.

Mr. Wiggins, gardener to E. Beck, Esq., Isleworth, had six beautiful kinds of Cinerarias; one called *Prince of Blues* is the finest light blue Cineraria that ever was exhibited. It was noticed by every lady; but whether or not it is up in the "points," I did not hear; *Eugenie* is a purplish-blue; *Amy Robsart*, a favourite; *Exquisite*, a fine crimson and white; and *Lady Chamoy's*, white with blue edge.

MISCELLANEOUS.

There were three kinds of crimson Rhododendrons, of the *Arborea* crosses with *Cataubiense*, in cut blooms, from a gentleman in Kent, who said, or wrote to say, that they withstood the late frosts uninjured, and they were as brilliant as *Arboreum* itself. There was also a faggot of the young wood of *Maclura aurantiaca*, or the Osage Orange of the United States; the shoots were from eight to ten feet long, from the size of a switch to that of a small walking-stick, and all as thickly set with thorns as a Rose-bush, and the thorns as formidable as those of Cobbet's Locust, or *Robinia pseudo acacia*. This is a formidable hedge plant in the United States, but too tender for hedges in England, otherwise, it would be better than our thorn hedges.

FRUIT.

The best *Black Hambro's* were from Mr. Clements, of Oak Hill, East Barnet; the second best, from Mr. Eling; and the third best, from Mr. Mitchel, of Brighton. The best Pine, a *Providence*, 7lbs., was from Mr. Robinson, gardener to Lord Boston; the second, from Mr. Fleming; and the third, from Mr. McEwen, of Arundel. He had also the best vegetables, best Strawberries, and best Raspberries; and Mr. Fleming had two citron-sized, handsome Melons, called *Trentham Hybrid*, white flesh. I tasted one of them, which was deliciously sweet and high-flavoured. One would think such a Melon was a cross between the Queen's Pocket Melon and some of Ispahan kinds.

D. BEATON.

HINTS SUGGESTED BY THE NORTHAMPTON-SHIRE SHOW AND PROVINCIAL EXHIBITIONS GENERALLY.

FEW that had the fortune to ride any distance upon the top of a coach on the evening of the 3rd of May, where the wind was equally strong and piercing, would readily forget the clouds of dust, which rendered respiration difficult, the driving hail and sleet that ensued, followed by the sharp frost of the morning. For fully ten weeks the fields may be said to have been without rain, with a north-east wind continually blowing. The fields of Wheat, and other crops sufficiently advanced, had been duly rolled, alike to pulverise the surface and place the fine soil close to the necks of the young plants; and this operation, so necessary in general, had, in many cases, proved a misfortune, as the finely-divided soil had been swept off by the winds, and, in some cases, the young plants had been swept away likewise. The hedges, instead of exhibiting the young tender foliage of May, looked like fences of earth, so thoroughly was every twig and spray loaded and covered with dust.

Such weather, marked likewise by great changeableness as to sunshine and cloud, led me to anticipate that some things would be found out of the usual reckonings at the Northampton Show on the 4th; while the severe cold would keep several large exhibitors away altogether; and in both surmises the result showed but too much correctness, the large room being rather more thinly supplied with objects of exhibition than usual, and though the visitors were numerous, and seemingly much delighted, they came not at all in proportion to the size, the wealth, and the intelligence of the locality.

Though, therefore, on account of the absence of some exhibitors, there were fewer objects than usual; and the peculiarities of the season, and more forcing than customary, had prevented some things, such as *Cinerarias*, reaching the previous Northampton standard of excellence, the most of the plants were in superior condition,

and everything was so well arranged by the indefatigable secretary, Mr. Macquire, as to show them off to the best advantage, and made the task of judging the relative merits a comparative sinecure.

It is not my intention to mention the particulars of the show, leaving these and the names of the successful competitors to the local journals. A few of the most salient points only will be noticed.

VEGETABLES.

These, as usual, were shown in splendid condition. The collections of Mr. Gardener and Mr. Watts were first among gentlemen's gardeners and market gardeners respectively. The Onions in the first, and the Brocoli and Asparagus in the second, were very fine. A new feature was introduced here which deservedly attracted much notice—*The best tray of Salads*—and was eagerly competed for; Mr. Barber being first. He had a beautiful Cucumber, excellent Lettuce, Radishes, &c., and a great variety of all the smaller salading. Among the cottagers, the Onions, Potatoes, and Cabbages, were particularly good, and some of the Carrots and Parsnips were also very fine.

FRUIT.

Fruit was scarce, consisting chiefly of *Wykin Pippin Apples*, good *Keen Strawberries*, from Mr. Gardener, and excellent *Black Hamburg Grapes*, from Mr. Mackie, gardener at Delapre.

FLORISTS' FLOWERS.

Those little beauties, the *Polyanthuses*, were entirely wanting. Good specimens were exhibited of the various edged *Auriculas*. A beautiful, well-formed, purple self was shown, with a clear white eye, named *Jupiter*, said to be a seedling. These were all exhibited by one grower, but I forgot the gentleman's name. Mr. Archer was first for *Heartsease*, but he and other growers had found the season too much against reaching their previous excellence with this lovely flower. The *Cinerarias*, as above remarked, were not as they used to be, partly owing to the season, and partly to growing the plants admirably in large pots, the tendency of which is to give fine foliage at the expense of small umbels of bloom. I mention this latter fact here, because I noticed, at several country exhibitions last year, that the evil was a growing one, especially with what may be deemed next to annual plants. Now, in almost every case, unless extra time is allowed for the roots to get somewhat matted before the flower-stems are much grown, the result will be, fine plants, but the bloom the opposite of massive. Perhaps I may be wrong, but it strikes me that the newer kinds of *Cinerarias*, though superior in form, are apt to be rather spindly in their growth, and require the reverse of overpotting, to cause them to throw up dense, compact umbels of bloom. As somewhat corroborative of these remarks, the best *Calceolarias*, exhibited by Mr. Walker, were in the smallest pots, and another noticeable thing about them was, they were not disfigured by a single stick. Some people seem to imagine that a faggot of nicely whited stakes, placed with something like mathematical precision, whether really wanted or not, are essential to the beauty of a plant. Playful satire has done what common sense, and even regard for health and happiness, seemed powerless to accomplish—banished, or, at least, modified the "*chevaux-de-frise*" of whalebone and steel, in which our ladies, and foolish dandies of the other sex, encase themselves, imagining all the while that such crutcheting and bending are necessary to perfect the beauty and comeliness of the "*human form divine*" Would that we gardeners saw that every screw, stake, or crutch, is so far a drawback from the

beauty and symmetry of a plant. There was nothing in the flowers of Mr. Mackie, nor in those of Messrs. Johnson and Gardener, that were an improvement upon, or hardly up to the mark, as respects form and texture of former years, but the plants were mostly all distinguished for health and vigour of growth, while in some of the plants shown by Mr. Gardener, in addition to the large foliage, and the large flowers of the herbaceous group, the plants seemed to throw up one strong stem, while from that stem side-shoots branched out in a more regular manner than even in the shrubby kinds, so that with one stick, and concealed by the foliage, the plants, with scarcely any training, might easily assume the shape of a nearly regular cone, with bloom from top to bottom, and thus be peculiarly fitted for specimen plants, in positions where flat-headed specimens might be objectionable. I have never noticed, previously, such a tendency, in this group, to assume the conical or pyramidal form, and though the flowers were not what florists would call perfect, the singular style of growth would be well worth preserving for purposes of ornament.

With the exception of several collections of splendid *Mignonette*, the best of which, again, was in the smallest pots (16's), while very large bushes were in 8's, and the second best in 12's, the very best besides being, I believe, not the common *Mignonette*, but the sort sent out by the Messrs. Henderson, as the *tree*, and distinguished by the size of its spikes, and the size and deep green of the foliage, marking it out as a distinct and desirable variety. A good assortment of single *Anemones*, but one collection of which had been gathered too early, the blooms refusing to open. A number of beautiful bouquets, tastefully got up, the best being exhibited by Mr. Barker, in a small hand vase, the sides being nearly concealed by drooping flowers of the *Glycine sinensis*; and a miscellaneous collection of plants, not for competition, from Mr. Smith, the *Azaleas* not being quite so fully open as last year, and reminding us of one whose happy tact used to bring sunshine with him to these meetings. The remaining, and the really most striking, objects, were two collections of stove and greenhouse plants, and two groups of *Azaleas*, belonging, respectively, to Messrs. Gardener and Mackie, and with respect to which these gentlemen again divided the honours.

Of the *Azaleas*, Mr. Mackie showed nice conical specimens, supported by one concealed stake in the centre, of *Jacksonii*, *lateritia*, *formosa*, *Rosca*, *punctata*, *splendens*, *mirabilis*, and *magnifica pleno*, they were beautiful dense bushes; one mass of blooms, about two-and-a-half feet high, and from three-and-a-half feet across at the base, and a beautiful plant of *Prestantissima*, the highest conical part in the centre being not much more than a foot above the rim of the pot, while the width of the base was more than three feet, and the branches hanging down nearly to the table. Mr. Gardener showed pyramidal plants of *Peryana* with fine bloom, but the branches rather thin; similar pyramids full of bloom of *magnifica*, *prestantissima*, and *Jacksonii*, and nice dwarf plants of *variegata*, two-and-a-half feet by three; *lateritia*, one-and-a-half by two-and-a-half, and a sweet little specimen of *exquisita*, and a second *variegata*, a little more than a foot high, and two feet through at the base.

The most striking plants in the collections were a dense bush of *Acacia grandis*, a good *Pimelea spectabilis*, a huge bush of *Diosma fragrans*, a good *Tropæolum*, and a *Chorozema Henchmanni*, exhibited by Mr. Gardener; and a huge bush of *Eutaxia*, a yellow *Erica*, an *Eriostemon*, a *Pimelea*, and a large *Cytisus*, exhibited by Mr. Mackie. Mr. Mackie also exhibited a small collection of Heaths, and a group of Roses, chiefly dwarf standards, and which, for the size of the plants, were

admirably bloomed. They were exhibited without a single stake. No amount of whittling could have added either interest or beauty.

GENERAL REMARKS AS TO PROVINCIAL EXHIBITIONS.

Why do not thousands instead of hundreds visit such exhibitions as these? Why is it that there is, too generally, a time of great prosperity followed by decline, and either a future renewal of vigour, or extinction? As a general rule, I have found that small towns, with their one or two exhibitions in the year, are more lasting and less liable to change than the three or five shows in a larger town. One of the most successful provincial shows, as respects variety and number of objects, I have lately seen, was held at Daventry last season. The numbers attending seemed very large. The show was held, in a beautiful meadow, out-of-doors. Daventry is a small place in comparison with Northampton. But then, at Daventry the flower shows are the *great* events of the season. There is a lack of these *fêtes*, and *soirées*, and concerts, and lectures, and sights of various kinds, that are so abundant in Northampton. In large towns, therefore, the flower show has to contend with many objects of attraction. Much real prudence is also often exhibited by obtaining large numbers of members, though the subscription should be low, giving members tickets accordingly.

Again, it is desirable to have early exhibitions indoors; but after that they rarely succeed so well as when held out-of-doors, in a garden or park. We pride ourselves, and justly, on the variety of the flowers; but to vast numbers these are greatly enhanced when the seeing of them forms a decent pretext for at least part of a holiday. Have your exhibition in a room, however large, and it is soon traversed and retraversed. There is little opportunity for conversation, and breathing those sweet thoughts that are mere nothings to all but the interested parties. We would not change human nature; we have no desire to see ladies so careless of even their attire, as to cease, even by the tints and the graceful outline of their dresses, as well as the happiness beaming in their countenance, to be too successful rivals in attracting admiration, even from our favourite flowers. But think of the crushings round tables in a crowded room; the closeness of the atmosphere, even when ventilation is attended to; and the deafening crashes of music, that cannot be mellowed for want of sufficient space. Observe the difference of the whole affair, when the foot presses the green sod, and there are walks, and avenues, and benches, where friends and acquaintances can congratulate each other. I know an instance where great success attended exhibitions in a little town, so long as the gentlemen in the town and vicinity had the exhibition held in their gardens in turn. I am not aware that one of them had ever to complain of the slightest injury being done. By-and-by, however, they seemed to get tired of it, and the shows were transferred to large and commodious rooms; the first but sure step to decline, and then to total extinction. There are places in, or, at least, close to, Northampton, well-fitted for such a purpose. It would not become me to be too specific; but if held in a place in my mind's eye, there could be no difficulty in transferring the show to the Exchange, provided the day was decidedly unpropitious. Then there is the tastefully laid out Tea Gardens at Blisworth; just a nice run out and in for the young people, and old folks too. The only drawback to having such exhibitions out-of-doors is the expenses they involve if the weather should be unpropitious. This would land us in the thick of another question as to financial affairs; the mere touching of the surface of which would show the importance of depending for revenue almost entirely

upon the income and subscriptions of the previous year for the out-goings of the present. In neighbourhoods where gentlemens' seats abound; in largish towns, where you will hardly meet a tradesman, or a mechanic, or a labourer, who would not think himself, to say nothing of his wife, or his sweetheart, insulted, if you told him he had no love of the beautiful in his composition;—it ought to be felt as a sort of public disgrace, that the committees of gardening societies cannot move a step, without being jerked back by the ominous consideration,—a want of funds.

"We do not go to these shows, because there are so few things; and because such and such a gardener let us know that he could not take his things on account of the weather; a very shabby trick of him." Something like these words have been dunned in my ears for several years past. Some time ago, I entered upon the subject of exhibiting, and showed there were many cases in which a gardener would consult his own happiness and interest in never exhibiting at all. Be it to their honour stated, there are many who hold so far opposite views, that they will exhibit, if barely *permitted*, instead of being *encouraged*. Let it be clearly, however, understood, that many at country exhibitions have nothing but the chance of a small prize, or prizes, to meet the whole of the attendant expenses of carriage, portage, &c. A gardener, who had great experience as an exhibitor in London, told me, the other day, that neither distance, nor cold, nor wet, ought to deter an exhibitor at a country show, as he had taken tender plants to London with more than a dozen degrees of frost. But then it should be known that he was *encouraged* as well as permitted. Contrast this with the case of a man who is merely permitted; who must get a conveyance as best he can, one that would do for June, but not for a frosty morning in May; and that it is expected that these plants shall be returned in as good order as when they started, and with the risk of not only trouble but expense out of pocket. This last may seem a trifling matter; but gardeners are not over-paid; but very often the reverse; and, as a class, have more claims made upon their hospitality than, perhaps, any other class possessing a similar income; and, therefore, however anxious they may be to please the citizens of a neighbouring town, not only with the beauty and the quantity of their productions, the question of expense alone stares them in the face, as well as the safety of their master's plants of a frosty morning, as preventives to the gratification of the citizen who requires quantity as well as quality to please him.

Granting, then, and there is something in it, that quantity and quality are necessary to the continued success of provincial exhibitions, and supposing that the gardener has many plants that would be very attractive in a group, though not of a kind to compete for the prescribed prizes, the question of expense alone might prove a great barrier to his producing them. Then, supposing he resolves to compete in several groups, the difficulty is any thing but removed. There is not merely the chance of failure, for, however excellent, all cannot be winners; but in many societies, there is not only the yearly subscription, the first *open sesame* to competition at all, but there is a second fee demanded, as a per centage on all subjects entered for competition; thus giving the whole affair something of a sweepstake character, and entailing, so far, another dead loss, should he prove unsuccessful. Now, there are plenty of cases where even common prudence, in such circumstances, must lead a man to pause before entailing much expense in furnishing exhibition tables. Then what is to be done to secure quantity as well as quality, and give a greater interest to the whole affair? The last one gained, everything else will be easy. I will merely mention a few.

1. Secure a good income, by a gentle pressure on the whole population above the position of day labourers.

2. Throw overboard the whole concern of entrance-money; far better have smaller prizes at once. The trifle it brings is nothing to the annoyance and hesitation it creates.

3. When a fine show from miscellaneous groups is required,—technically called furnishing the tables,—the whole expense of carriage ought to be guaranteed by the committee.

4. Do not curtail, but increase the classes of exhibitors. Enquire what classes of exhibitors you may calculate upon, and make regulations to suit them. I have seldom seen more interest exhibited than at Daventry, last autumn; but it was a town affair, every body was interested. The vast number of entries was almost apocryphal. From the gentleman's gardener to the possessor of one plant in a window, all were competitors, and each with a neighbour possessing similar advantages. The prizes, in such cases, were small, but they were numerous, just as they ought to be. Many plants were no ways striking; but they had never seen anything but the window of a dwelling-room. I have, as a judge, passed collections of plants, because I had no right to know anything of the growers, and regretted afterwards to find that they belonged to amateurs with but limited conveniences. I did so the other day. Had they stood in a separate, well-defined class, they would have had a good chance of being favourably noticed. We do not expect the bouquet from a labourer's garden to compete with that brought from the plant-houses of a nobleman.

Once more. In addition to well-defined classes, *increase the sections in which favourite flowers are to be exhibited*. Get twenty-fours, and twelves, and eights, if you can; but do not despise sixes, nor fours, nor threes, nor twos, nor even single specimens. Single plants would open up a large supply. I have sometimes seen this stretched to a point, such as showing in a mixed collection, in a collection of plants of the same genus, as Azaleas, and then as a single plant, having three plants of the same variety. In such a case, we would not like to show a specimen singly at all, as the best should go in the collection. I certainly should not like to award such a single specimen a prize unless it was greatly superior to these shown in collections. When prizes are offered for distinct groups, plants of that kind should be sparingly introduced elsewhere. Encouraging single plants of good growth would increase the number of exhibitors. From success in one plant many would be induced to try two or three; while prudence would tell many they would be more likely to be successful with three than with eight.

These remarks have been hastily thrown together, and my only excuse for all shortcomings, is the knowledge and conviction, that whatever congregates mankind in surveying together the beauties of flowers, must be regarded as a means for making them wiser, better, and happier.

R. FISH.

ADVICE TO YOUNG GARDENERS.

I FIND, in looking over the few papers I have addressed to my young friends, that I have omitted a few points that it will be wise to remind the young man of on taking his first place.

There are, as is well known, various gardens that are of different extent. The highest in rank are the gardens belonging to the Royal Family—such as Frogmore. The next are the ducal gardens—such as Chatsworth and Trentham. Then there are Botanic Gardens, of which the curators, who are at the head of these establishments, ought to be clever, intelligent, and

well-informed in every branch of horticulture and floriculture. Then there are the gardens of the lesser in rank, of country gentlemen; and, lastly, the gardeners to retired merchants or citizens.

Now, a young man about to take the management as head-gardener ought to study the habits and rank of the employer who may engage him to manage his or her garden, and so conduct himself, his men, and his garden, as would meet with, and satisfy, the wishes of the owner. In order to be able to do so, he should qualify himself, by study and practice, for the highest situation in the empire, and not to be above taking the lowest. He is then open to, and fit for, any place that may be offered to him.

I would advise him to be always striving to improve the products of the gardens committed to his charge. It is certainly the duty of a gardener to study the habits and requirements of the family. He must study their comfort, in keeping the walks well rolled, and as dry as possible, so that the garden can almost always be visited with pleasure. Some delight in plants that have scent, and for such, a great number of pleasant-smelling flowers should be as constantly as possible kept sown or planted. Some delight in sounds, and love the blackbird, the lark, and other feathered songsters, for such, the gardener should preserve the nests of the wood, and the hedge, or field.

If the family reside at the place all or nearly all the year, the gardener must strive to provide enjoyment all the time, both of the pleasing kind, by a constant supply of cut-flowers, by plants in pots in the glass-houses, or furnishing stands in the house, and a good supply, as far as the means allowed will afford, of fruits and vegetables such as the family prefer.

As Mr. Loudon says—"The great art of deriving enjoyment from a country residence, is to provide an interest, a hope, and a fear, for every season, or even every month in the year." A good, industrious, and desirous-to-get-on gardener will always be forecasting how to accomplish this. He will always bear in mind to have something, or many things to draw his employer's attention, interest, hope, or fear, in his garden. For instance, he might point out how to improve fruits by impregnation, and vegetables and flowers also. Thus he will certainly create an interest in the products of these seedlings,—a hope they will be improved varieties, as well as a fear that they may be no such thing. Then, again, great interest may be excited by the different arrangements of the plants in the flower-garden,—the effects of certain blendings of colour, with annual trials to learn the most effective arrangement of the different coloured flowers. Such an interest is very pleasing to many owners of even large estates, as, for instance, the Earl of Stamford, at Enville Hall, Lady Middleton, at Shrubland, near Ipswich, Lady Rokeby, at Hazlewood Hall, near Watford, and, no doubt, many others. Such gentlemen and ladies love their gardens very much, and greatly enjoy the interest, the hope, and the fear, their choice gardens excites. This passion it is the interest of the gardener to increase where it already exists, and to endeavour to excite where it does not.

Another point he ought not to forget, when it is required:—It may be, and is sadly too often the case, that the owner of a garden is an invalid, or some member of his family may be so afflicted. It is a great object to render the garden or its products an alleviation to their sufferings. Some are so afflicted as not to be able to walk, or to enjoy their garden at all, excepting by being wheeled in a couch or easy garden chair. In such a case, the gardener should so place pleasing objects, such as handsome specimen plants on elevated stands, or any other thing the produce of the garden, as would please the invalid. A little attention to such a person would be gratefully received as a mark of a feeling

mind, keenly desirous to administer comfort to the afflicted. A lover of his or her garden, confined to the house, would be pleased if the gardener would cull a few choice flowers daily for them, to see or smell, or even to send or take in a choice plant in flower for them to see and admire. Or even, now and then, a report of the progress of things in the garden the sick owner may be interested in, would tend to cause a slight forgetfulness of a weary sickness. When the body is diseased, any object that directs attention is a great comfort and relief, and the gardener who neglects to do his part in affording such relief must be devoid of common humanity.

Some places, such as Chatsworth, Enville Hall, Trentham, and many others, are thrown open by their noble owners to the public to be seen. This is very praiseworthy, and the gardener at the head of such establishments will, for his own credit's sake, see that every part is in the very highest order at all times. But other families may be of retired habits, and will desire (which they have a perfect right to do) their garden to be kept quiet, and no strangers admitted without their especial leave. This desire the gardener will, of course, attend to. I once lived with a family of this feeling, and so much so, that even the labourers and the young men were instructed to avoid the walks they especially delighted in. Yet, even this retired family delighted to see the walks, the turf, the flowers, the fruit and vegetables all well kept, and the best of their kinds. So the gardener who may engage to serve such a family must study their requirements, and take his measures accordingly.

T. APPLEBY.

(To be continued.)

BIGNONIA VENUSTA.

(THE LOVELY BIGNONIA.)

I MENTIONED, in my report of what I saw at Knowesley Park, the *Bignonia picta* as being a fine climber, flowering so early as March. I have now chosen one of the same genus to recommend to all who have a tolerable lofty stove to grow it in, as another rich climber, flowering in September.

Nearly twenty years ago, I saw it well-bloomed, trained at the back of a Pinery, in the gardens at Wortley Hall, near Sheffield. The Pinery was one in the old style, with a flue in front and another behind. The walk was between the back flue and the pit containing the Pines, and the roof was supported by pillars placed on the kerb-stone of the pit next to the walk. A wire was stretched from pillar to pillar, and on that the *Bignonia* was trained. The pot, if I remember right, that contained the roots of the plant, was a large one, and was plunged in a corner of the bark bed; hence, whenever the bark bed was renewed, a considerable portion of the roots that had found their way through the holes at the bottom of pot were necessarily cut off, and the exuberant growth of the plant was checked. This, Mr. Errington would call root-pruning to induce fruitfulness, and it certainly had the effect of causing this handsome climber to flower more freely than if its roots had never been disturbed.

This, however, is not the only instance where I have seen *Bignonia venusta* blooming freely. Some five years since, I saw it bloomed much finer in Her Majesty's Gardens, at Frogmore. Though these gardens are expected chiefly to produce fruit and vegetables for the royal tables, yet Mr. Ingram loves flowers, and so does his royal mistress.

Well, in those gardens I saw this beautiful climber flowering profusely. It was treated differently to Lord Wharncliffe's plant, inasmuch as it had no bottom-heat,

was planted out in a narrow border against the back wall, and was spread out irregularly on the trellis that had been put up to tie creepers to. There it flowered most abundantly, and the bunches of blossom were of a very large size, and most brilliant colour, caused, no doubt, by the great amount of light, and no less by the great space it had to spread its branches and leaves to the full light. There can be no doubt but the more light the leaves of a plant have, the more it perfectly will perform its functions of producing flowers to produce seeds,—the grand end of perfect fructification. One predisposing cause of the plant at Frogmore, like the one at Wortley, flowering so freely, was the narrow space the roots had to spread in. In planting out many rapid and rampant-growing stove-creepers, we make a great mistake in giving the roots too large a space and a soil too rich. This would not be a mistake if we had a Crystal Palace, like that of Sydenham, for the creepers to have ample space to spread out their foliage to a great supply of light. In such spacious buildings, the peculiar sap that causes a plant to produce its flowers has time and space to be generated, especially if heat and moisture is combined with light to have the desired effect. I have no doubt, the reason why many fine plants, natives of warm climates, do not flower with us as they do in their native regions, is the want of space to expand their leaves, and a deficiency of light. Plant cultivators are generally too anxious to have too many plants in their stoves in proportion to the space; hence, many never or very rarely flower. This point is well understood by the exhibitors at the great metropolitan shows. They take care that every specimen stands alone, in order that it may have its due share of the stimulants to bloom, namely, heat, moisture, light, and a season of rest. I go into many stoves, and generally see too many plants by more than half thrust in, and so crowded, that it is impossible that they should give any satisfaction. I, if my advice or opinion is asked, always say, cast one-half of your plants to the dunghill, and then the remainder will have a chance to grow well and flower freely.

Position.—The *Bignoniæ venusta* should always be planted out in a somewhat confined space and rather poor soil. The branches should be spread out, not tied in a bundle to a rafter, and should have plenty of space to grow in.

Culture.—It should be well supplied with water during summer, but stinted in winter. The heat, during the growing season, should average 70°; 5° below by night, and 5° above by day. In winter, but little water should be given, and the heat should be at least 10° lower by night and by day than in summer. The shoots in autumn, after the bloom is over, should be cut in freely, for the flowers are produced on shoots made the same year. With this treatment, this truly fine climber will produce most abundantly its noble heads of rich orange blossoms.

Propagation.—It is propagated by cuttings; short, stubby shoots, taken off close to the branch are the best. Put them in sand under a bell-glass in heat. They require a rather long time to root, but will do so in time.

T. APPLEBY.

STRAWBERRIES FOR FORCING ANOTHER YEAR.

THE case of a correspondent, writing from a cold, bleak situation, on the best method of obtaining plants of Strawberries for forcing, being one very likely to interest many others similarly placed, a few words bearing on the subject will not be out of place here, especially as it may reach many readers before they have made all their arrangements for the current year.

Our correspondent says, he has a quantity of last autumn runners in small pots, of *Keen's Seedling*, *Hooper's Seedling*, and *British Queen* Strawberries; and he wants to know if potting them into larger pots, and growing them on during the summer, will not be a better way than trusting to the runners of the current year; as he says, that in spite of carefully pegging down the earliest runners he can get into small pots, and repotting them into larger when ready, he is not able to get plants large enough for forcing early. Now this is no unusual case, neither is it confined to cold, bleak situations, for warm, dry, sunny ones are equally liable to such disappointments, where the soil is not one adapted to Strawberries; for I have seen such soils where ordinary vegetables flourished well, and most fruits admirably, where the Strawberries only dwindled out a sort of wretched existence, being merely supported by such auxiliary assistance as was afforded by a favourable season, or the addition of moisture, or other means, as a mode of supplying the wants of the plant with that food which the ground denied it.

In the first place, we will suppose the grower to have a quantity of Strawberry plants in three and four-inch pots, which have been standing out all the winter, protected at times by some covering, but at the present time giving tokens of a wish to have more room to grow in. Now, there are two modes by which this can be effected, differing in detail, but leading to the same result; the first, is to repot them into larger pots at once; and the other, is to plant them out on some piece of good ground, where they will have a chance to grow well and strongly, and be in readiness to take up by September, to put into pots suitable for introducing into the forcing-house; the latter of these modes is the one that I would adopt, and is, in fact, the best one to obtain good plants for forcing in such places as are not congenial to the Strawberry.

The best mode for the enquirer to pursue would be to select a nice open piece of ground, where the plants will have the full benefit of the sun, and then put out the plants in rows about two feet apart, but they may be something less apart in the row. Then let them grow on until September, when they may be taken carefully up and potted into tolerably large pots, as we may fully expect them to have made good, useful plants by that time; but they must not be allowed to grow as they like during the time, otherwise the object is defeated, for they would be exhausted by the production of fruit and runners. It is, therefore, imperative to clear away all fruit-blossom as it appears, and likewise to cut away all runners as they show themselves, so that the plant may accumulate such matter as will enable it to produce fruit the ensuing year, when subjected to the trying ordeal of forcing; for, be it remembered, the same description of plants which will in ordinary seasons yield a fair crop of fruit in June, will not always do so in March and April; the reason is obvious; forcing is an ordeal which none but the most robust will successfully undergo; hence the propriety of having only well-matured plants put on that trial; observe, in cutting away all runners in summer, the leaves of the parent plant must not be injured, for they have a duty to fulfil in common with the leaves of all plants, and if now and then a few runners were left on a week or two they would do no great harm; for the close cutting away of all that show themselves tends to the quick production of others, which weaken the plant as much as if some had remained on; but do not by any means allow them to remain on long, and the sooner the plant ceases to produce any, the quicker it forms its embryo buds for the ensuing year, and is soon in a condition fit to be taken up and repotted; but many things will determine this; the season, in particular, will have most influence.

The second method would be to repot the runners that are in small pots into larger ones, but adopting

the same course in removing all runners and flowers, both of which will, most likely, be more sparingly produced in pots than when planted out; however, the object is the same—an encouragement of the plant to grow and accumulate strength sufficient to bear fruit the ensuing season. This is sometimes successfully accomplished by planting-out the old forced plants, and taking them up again in autumn; but this is not so certain a method, for the irregular growth of such is against their being in forcing order at the proper time; in fact, it is not unusual to see plants that have been bearing fruit in March, blossom and produce fruit again in September; when this is the case, it is useless to expect blossom-buds set for the ensuing year, and many plant out their forced plants for the express purpose of producing such a late crop; but they cannot always be depended on. Nevertheless, the amateur who is anxious to try experiments may try their mode of obtaining late fruit.

It is almost needless to recommend particular varieties for forcing, for all have their merits and demerits. *Keen's Seedling* is the most used; but *Hooper's Seedling* is an excellent Strawberry, and, I believe, the *Black Prince* answers well also in most places; but the *British Queen* is not so general a favourite; in fact, there are many gardens in which it will hardly live. I cannot make anything of it here; the plant will hardly exist in soil where other kinds thrive tolerably well, and there are many places where it is equally uncertain. Even in places where it will grow, it is a very uncertain one to force, and by no means an early one; but it is, unquestionably, better-flavoured than most others, and where it really flourishes it is certainly deserving the name it carries; a name, by-the-by, which is, or has been, given to some variety or other of almost all the fruits, flowers, or vegetables we possess, but in none of them is pre-eminence so conspicuous as in this Strawberry, and certainly in none is it more deserved.

Let it be remembered, that when Strawberry plants are not in a forward, well-prepared state in the preceding autumn, it is useless to expect fruit; and all who have not the means of taking off runners early in the season, and forwarding them on so as to fully occupy a thirty-two pot, and present a prominent, elevated crown of robust appearance, had better not attempt the forcing of this fruit, for it will not be successful. Thus it requires all the care of the cultivator the previous year to make them do well; but no amount of skill whatever will secure a crop from plants that have been either late runners the previous season, or neglected at the time they wanted assistance; for, be it remembered, the Strawberry does not grow late in summer.

J. ROBSON.

NATIONAL TULIP SHOW AT CAMBRIDGE.

It will be seen, by our advertising columns, that in consequence of the continuance of the very ungenial weather, the Committee for conducting the NATIONAL TULIP SHOW, at Cambridge, have arranged to postpone the same for a week, viz., until the 29th inst.

"BE STILL."

By the Authoress of "*My Flowers*."

"THE fool hath said in his heart, There is no God." Now, dear readers, though we may not actually say this, though we may, peradventure, intend to be considered believers, yet how many, how very many times in our lives do we stand, as it were, aghast at the wonderful workings of God, and feel as much surprized as if the book of His revealed will contained no promises, no threatenings, no

declarations, no manifestations of His almighty power, or wealth, or love; or as if what it does plainly set forth belonged to past ages, and not to present days.

The following narrative, which I copy from an old volume of the "*Saturday Magazine*," is so full of interest, solemn teaching, and profit, that I am sure no parish in England can furnish anything more instructive and affecting; and I earnestly hope it may be a wholesome warning, as well as strong encouragement, to many who may read it.

"John Carter is the son of a labouring man, who is still living at Coggeshall, in Essex. After having been taught to read and write at the parish school, he was put to learn the trade of silk weaving, and although not a steady lad, was esteemed, in due time, to be a good workman. At the age of twenty he married; but, unhappily, he did not give up his former bad habits, being frequently intoxicated, and very rarely seen in church.

"One Saturday night, in May, 1836, he had been drinking at the alehouse, with seven or eight other young men, as much inclined for mischief as himself, when one of them proposed that the whole party should go up to the plantations of G. Hanbury, Esq., of Holfield Grange, to rob the rooks' nests. In this reprehensible employment they were engaged until near one o'clock on Sunday morning, when Carter, having climbed to the top of a fir-tree, attempted to reach another, which, in the darkness of the night, appeared to be within his reach; he jumped, missed his hold, and fell to the ground. Happily for him, the branches broke his fall, or he would, in all probability, have been killed on the spot, the height of the tree being not less than forty feet. His companions carried him home in a state of insensibility, and apparently dying, to his wife, who had gone to bed ill, and, as usual, in no small anxiety about her unsteady husband. Hearing the noise below, and thinking he had come home in liquor, she came down, and, as may be easily imagined, was overcome by the spectacle which presented itself. He was lying on a hurdle, and one of his companions sitting by his side, the others having left him. Everything was done for him that could be done; but it was late on Sunday afternoon before he recovered his senses, and then his first thought was that he should certainly die, and have to render up his account to his offended Maker, with all his sins upon his head."

Reader! observe how terrible is the thought of death! A man may be going on as merrily as a lark, thinking nothing of judgment and eternity; perhaps, making a joke of them both, and being so bold and fearless that nothing might seem likely to daunt him; and yet, the thought of death when it does seem at hand, how it terrifies him! Surely, there must be something wrong within us, or we should not so soon forget, and act just contrary to what we have said before! Surely, we should not tremble at death, if we were SURE of going to heaven, or if there was nothing in all that some people say about the Bible, and the Saviour, and the soul! Ah! reader, reader, if you ever thought lightly or nothing about death and judgment, ponder a few minutes here.

"A week of intense pain, without a moment's sleep, served to increase his alarm; but by degrees his bodily sufferings were mitigated, and there appeared to be some reason to think that his life might be spared, at all events for a time. As the inflammation and swelling subsided, it became evident that he had sustained some injury in the spine, which had deprived him of the use of his limbs, and, indeed, of every muscle of his body, and of all sensation below the collar bone. For twelve months he lay motionless upon his bed; but the time was not lost; for by the blessing of God upon the endeavours of the worthy and benevolent clergyman of the parish, aided by some excellent neighbours, and a supply of good books, he was brought to a sense of the sinfulness of his former life, and to an earnest, and as is hoped, effectual inquiry after the means of pardon and salvation, through repentance and faith. He is now a devout attendant at church and at the holy communion, whenever the weather is such as to allow of his being drawn there on a sort of couch, upon which he is moved."

When the Lord has a purpose of mercy for the soul, His ways are not always such as are pleasing to the flesh, but they are those which he chooses to work by and bless. To some stubborn hearts He says, "Be still, and know that I

am God." How loudly was this command uttered to poor John Carter! He was, indeed, by one stroke, made "still," as to the body, for ever! The Lord met him in his madness and folly, and struck him down, never to rise again. But this, even this, was a loving stroke. Perhaps a lighter one would have done no good, and, therefore as we often see among our own children, severity is the kindest treatment a parent can employ. The loss of his whole bodily powers was to bring about the salvation of his soul. Nothing else, certainly, would have done, or the Father would not have smitten the child so sharply. Reader! believe it, that every stroke, every trial, every affliction *you* meet with, is a Father's method of dealing with you. You may not heed them, but they are sent in mercy to rouse and awaken you, and woe be to the soul that does not rise up at the call!

Now, let us mark the Lord's mercy towards the smitten body of this interesting sufferer. "About a year after the accident, his wife saw, and borrowed for him, a little book, which gave an account of a young woman, who, having lost the use of her hands, amused herself by drawing with her mouth. He determined to try to do the same. At first he copied butterflies in water colours; but soon adopted a better style. His kind patrons, the family of Mr. Hanbury, supplied him with Bewick's "Birds," and other engravings of the same description, and he soon learned to sketch them very accurately, with a camel's-hair brush and Indian ink. Inclined towards the right side, with his paper and copy fixed to his drawing desk, which is placed in a convenient position on the bed almost perpendicularly before his face, and with his hair pencil between his teeth, he can produce, by means of the motion of his neck, assisted occasionally by his lips, most delicate and beautifully turned strokes. He lives upon parish allowance, his weak state of health preventing any further application to his new employment than is sufficient to procure for him some few additional comforts, or, as they may be well called in his case, necessities."

This account was published in 1840. Whether John Carter yet lives, I know not; but should he be dead, he yet speaks loudly to us from his tomb. What encouragement to us to use our weakest powers diligently! What difficulties, and apparent impossibilities can be overcome! The heaviest afflictions can be softened by the tender mercy of God, and the most untoward circumstances turned to good account. I believe the gracious assurance, "Only believe: all things are possible to him that believeth," was not spoken only to *one* individual, but to *all people*, and throughout *all ages*. I believe that faith, though not bigger than a mustard seed, can remove a mountain. Readers! ponder deeply upon the history of John Carter, and pray that it may be made profitable both to soul and body.

A MANURE MANUFACTORY.

WE gladly give from a recent number of a contemporary the following sketch of a manufactory in which the Gardener, as well as the Farmer is interested. We intend, one day or other, to pay a visit to the same works, and we promise our readers a faithful account of our pilgrimage.

"It is only within these few hours," says the Editor of *Bell's Messenger*, "that we have seen the interior of a modern manure manufactory. We had often, it is true, been invited by our neighbour, Mr. Edward Purser, to visit the works of the London Manure Company in the Isle of Dogs, but we did not consider that what we were invited to see would be likely to repay our labour, neither did our reminiscences of the London manure yards of the olden time inspire us with any pleasant forebodings. Still, on a bright April morning, in company with the manager of this company, we wended our way towards the Isle of Dogs; and we confess that we never saw anything less like what our imagination had depicted. Instead of open yards, full of decomposing animal matters, we beheld large covered inclosures—not a trace of anything to offend the senses; and after spending a morning in examining these works, the practical energy employed, and the science so continuously brought to bear in producing the most fertilising compounds—after noting these things, we left the works

with a far more elevated opinion of the manure establishments of England than we had before. When we describe only these works, it is merely because we have seen no others; there are the manufactories of Mr. J. B. Lawes, and other companies, which, we believe, are conducted much in the same way as those to which we are about to introduce our readers.

"Upon our arrival at the works, we were first introduced into a small laboratory, where most of the numerous chemical examinations required by the company are carried on, under the care of an intelligent analytical chemist. We here learn that it is only by systematically analysing every substance the company purchase that they can guard themselves from fraud; for it seems that adulteration is rife even in the ingredients of which manures are made—that coprolites are mixed with flint stones, gypsum with chalk, sulphuric acid has its specific gravity increased by adding to it glauber salt, and even soot is mixed with finely sifted coal ashes.

"Leaving the laboratory, we were led through the manufactory. Here large heaps of manures seemed closely packed in all directions. Huge heaps of calcined bones were ranged on one side, large mounds of superphosphate of lime were piled one on another; heaps of bags filled with sulphate of ammonia reclined against one side. Through one river-side door a gang of labourers were emptying barges filled with calcined bones, collected on the banks of the La Plata; another barge, filled with animal charcoal from France; a third, with Suffolk coprolites, was waiting to be unloaded; a fourth, full of common salt; a fifth, with cubic petre from Lima; a sixth, with Sicilian sulphur, for the preparation of sulphuric acid, had just arrived. These were the raw materials—the food for the devouring machinery of the manufactory, to which we next had our attention directed. Here were powerful crushers, rollers, millstones, and other machines for breaking and grinding the stubborn bones, the still harder coprolites, and other tough substances. In one portion of the manufactory a group of labourers were mixing together large heaps of ground bones, coprolites, dried blood, or other nitrogeous substances. This mixture is then carried, at the rate of three cwt. per minute, by a peculiar machinery somewhat resembling a chain-pump, to a large iron cylinder lined with lead, in which an iron beam, armed with stirrers, is rapidly revolving. Into this mixer a stream of sulphuric acid is constantly flowing, and from it the mingled substances, in a semi-fluid state, pours out into some very large kind of bins, where the mass speedily becomes solid; and this, after it has been made a proper length of time, constitutes the superphosphate of lime of commerce. Opposite this machinery a gang of men were breaking down and filling the superphosphate into bags for shipment into the country. Behind them a steam-engine was noiselessly at work, turning the agitators in the mixing apparatus, pumping sulphuric acid, and performing other tasks.

"Passing the engine room, we entered upon another branch of the manufactory—it was here that a row of furnaces of a peculiar construction, in which a mixture of sulphur and cubic petre is burnt, marked with its bright blue flames the spot where the oil of vitriol, or sulphuric acid, is made. The sulphurous appearance of the flame of these furnaces, the fumes they emit, the piles of bright yellow sulphur placed close by, the huge leaden chambers, each 75 feet long and 25 broad, in which the sulphurous vapours are condensed—all mark a peculiar and interesting manufacture. On another side we saw a great heap of the urate preparing; through another river door were streaming, to and fro, a gang of men loading barges with various manures. In a small room close by, a more powerful steam-engine than the first named was at work; it is this engine that moves the grinding and crushing machinery to which we have already referred. We were informed by our guide that about 70 to 80 persons are employed in the busy season at these works, which cover nearly an acre of ground.

"We felt, as our readers will feel, that here was a peculiar and interesting sight—a spectacle which 15 years since was not to be witnessed, for then not a single chemical manure manufactory existed in England. We thought of other lands, too; we could not but reflect that to produce such a manufacture as this, even at the moment when we

were quietly looking on, the busy natives of far distant lands were contributing their labours. We thought of the Chinch Islands in the rainless Pacific, and of a fleet of merchantmen waiting their turn to be loaded; we remembered the cubic petre grounds of Peru, the ships loading with this salt at Iquique. We came nearer home; we were reminded of the banks of the huge La Plata, of its countless droves of wild cattle, of their bones, once thrown away as useless, now collected, reduced in weight by burning, and annually shipped to the amount of thousands of tons; and then of the now nearly exhausted bones of Belgium and the Baltic, the refuse animal charcoal of the French sugar refiners. Still, when the merchant could find no more bones, when the demand for their phosphate of lime still largely exceeded all possible supply, then came Liebig, Henslow, and poor Buckland to the farmer's aid; they pointed out the bones of now extinct races of animals—failing a supply from the present world, they had recourse to bones and other animal remains formed and in use long before Noah floated in his ark over the submerged Asiatic mountains.

"Such a glance at an agricultural chemist's works is indeed instructive and refreshing—they remind us of past discoveries; they act as an incentive to other and perhaps still more successful inquiries—to discoveries which will be sure to attend upon agriculture, so long as the farmer continues to encourage the labours of men of science, and the productions of the honourable manufacturer.*"

GRASS AT THE CRYSTAL PALACE.

WE are pleased to observe, in THE COTTAGE GARDENER of May 1st., page 68, Mr. Beaton admires the turf at Sydenham, produced by the grass seeds sown last summer. We were also pleased to observe, when there about a fortnight since, there was not one plot which had failed. Mr. Beaton remarks, that whoever supplied the seeds may be justly proud of them; and we have the great pleasure of saying that we had the honour of supplying all the grass seeds sown at Sydenham.—JOHN SUTTON AND SONS, Reading.

RHUBARB VINEGAR.

THE following is the result of my experience in the making of Rhubarb Vinegar, after two trials in two succeeding years. The recipe was asked for in a number of THE COTTAGE GARDENER, perhaps two years ago, and I do not know that it has been answered. I can confidently recommend this as a very good and agreeable table Vinegar. The Vinegar that was bottled this time twelve-months is excellent, both in colour and strength.—E. GRANT, Housekeeper to W. J. Harding, Esq., Baraset, Stratford-on-Avon.

When the Rhubarb-stalks are plentiful and strong, cut them in slices, as for tarts, without skinning them. To each gallon of Rhubarb so prepared pour one gallon of boiling water. Let it stand three days, then strain it, and add 1½ lb. of coarse moist-sugar to every gallon of liquor. Barrel it, and keep it in a warm place till ready for bottling, which will be about March. Do not stop the barrel close whilst the liquor is in it.

INDUCING ROOKS TO BUILD WHERE WISHED.

IN one of your late numbers there was an enquiry as to the best mode of inducing rooks to build in any wood.

The best, and, indeed, the only plan I know, is to watch for either a magpie or crow to build in the wood you wish the rooks to colonize, and substitute rook's eggs for those

of the magpie or crow. The young rooks will return the following year, and in a few years there will be a strong rookery.—ANON.

DEATH OF AN IMPORTED SHANGHAE COCKERELL.

PERHAPS you may think the enclosed account, from a medical man, of the cause of death in a half-starved fowl worth insertion in THE COTTAGE GARDENER, as I believe it is rather an unusual case. The bird (a large cockerell) had only arrived from Amoy a fortnight, and was kept by night in a stable for the sake of warmth.—A CONSTANT READER.

"It is my painful duty to inform you, that after a careful *post mortem* examination of the body of your unfortunate chicken, I have come to the conclusion that he died a victim to his own excesses. Had he been content with the grain, &c., with which you doubtless bountifully supplied him, he would probably have long lived to be admired and respected by his brethren in the yard; but *not* content with your provisions, he had stuffed his crop with masses of straw and hay, which remained undigested in a state of fermentation, and thus became the cause of his untimely fate. May it prove a warning to others of his race who, after suffering the pangs of hunger, are suddenly placed in the midst of luxury and plenty."

[This, we think, was a decided case of "hard crop." The hay and straw were probably swallowed by the bird to act medicinally, as dogs eat grass for the same purpose. Feeding the bird too plentifully, and on hard corn, whilst his powers of digestion were weak from long confinement on board the ship, was the treatment which led to his death. If he had been fed on soft food, the catastrophe would not have happened.]

PEARS ON WHITE-THORN STOCKS.—COST OF POULTRY FEEDING.

IN observation on your correspondent's enquiry about Pears grafted on Quick Stocks ("H." March 13, 1855, page 463), I beg to say, that in 1850 and 1851, I grafted seven Pears on Quicks—*Beurré D'Aremberg*, *Napoleon*, *Sécle*, *Fondant Van Mons*, *Beurré Bosc*, and *Count de Launey* (which all took well), and some others (names lost) which failed; the failures, however, not above four. Of these seven which took, four only remain to me, the others having gone off at various periods, and one more (*Napoleon*) is dying at the top from canker. Of these four, *Fondant Van Mons*, *Beurré Bosc*, and *Napoleon*, are full of bloom; *Count de Launey*, moderately so. They are between six and seven feet high, and all but *Napoleon* very healthy. This miserably icy spring will, I fear, preclude my sending you a report of the quantity and quality of crop (they have not borne fruit hitherto), but if any should arrive at maturity after the 8° of frost of the night of May 2nd, you shall hear. They all overgrew the stocks, which was to be expected; but if the dryness of the Quick be not imparted to the fruit, which I also expect it will, the tendency to dwarfage will be an advantage in a small garden. An intelligent amateur friend of mine has, or had, some four or five years back, some stronger and finer trees than mine on the Quick stock, which, I believe, bore well. I have a small Medlar by the side of the Pears which looks flourishing, and has blossomed (it is younger than the Pears) but not fruited yet.

I think another correspondent, in your March number, which I have not by me now, asks how Shanghaes are to be reared and fed at so little as 1½d. per head per week. I could give chapter and verse for the fact, even during the heavy prices of corn of last year [Pray do], but have now no time, and have taken up your space should you insert this.—FRAS. H. S. SAY, *Braughin Vicarage, Ware*.

P.S.—I have for two seasons used the upright and inverted flower pot saucers as a chicken fountain, and certainly shall not buy expensive inventions so long as my garden pottery fails me not.

* In the first two months of the present year were imported—of the bones of animals, 4,616 tons; of cubic petre, 17,847 cwt; of guano, 17,410 tons.

THE SWALLOW PIGEON.

IN THE COTTAGE GARDENER'S description of the Newcastle Poultry Show, I see it stated that the pair of Swallow Pigeons there shown were the first that have been exhibited at any of our shows, which statement I beg to say is incorrect, as a pair were shown at Farningham in 1853; five pairs at the Surrey Zoological Show of December, 1853; and two pairs at the Great Metropolitan Show of 1854. The name "Swallow" is derived from the German "Schwalben." They are so called from their marking resembling that of the Tern, or Small River Gull, which the Germans call a Sea Swallow.—B. P. BRENT, *Bessell's Green, near Sevenoaks.*

NOTES AND QUERIES.

I made an enquiry, some time ago, through your pages, if any of your readers knew any remedy for *frosted Potatoes*. I was reading an amusing book, written by Dr. Doran, a day or two ago, in which he remarks, that if Potatoes have been frosted, and they are kept in a dark place covered up, that they will recover from the frosting; lose the sweet flavour, and regain their mealy condition. Can any of your readers corroborate this? Mine were in a well-lighted stable.

Wooden railings and palings are greatly used by suburban gardeners, but soon rot at the bottom by resting on or in the ground. This may be avoided by leaving a space of one or two feet, and placing a row of slates on edge; they look neat, and, when painted the same colour as the palings, are hardly distinguishable. They, moreover, do not afford so snug a nest for slugs, mice, &c., and will resist rabbits.

Has not Mr. Beaton made an error in the date of his foretold six weeks drought? We have now been without rain at least a month, up to the second of May. Is all May to be as dry?

Has any one heard the *Cuckoo* yet, and on what day? For several years the first has always been on or near the 14th of April, as yet I have not heard one, 2nd of May.

If the sun shines through the fruit trees at noon on Christmas day, it foretells a good fruit season; so says an old blue-apron, whose bloom-crowded trees I was admiring to-day.—W. X. W.

THE WEST LONDON GARDENERS' ASSOCIATION FOR MUTUAL INSTRUCTION.

MR. CATES'S paper on THE ATMOSPHERE OF HOTHOUSES was read.

He considers that the atmosphere of hothouses demands the greatest attention, for upon the hygrometric state of the air may be said to depend the health of plants, and also, to a certain extent, the perfection of the fruits raised in such structures.

The causes that constantly operate in rendering the artificial climate of hothouses unnaturally dry, are condensation of moisture on the glass, and damp, heated air constantly escaping through the laps of the glass, and by the doors and crevices of the building; this loss being constantly supplied by external air finding its way into the houses.

It was also stated, that the quantity of water a cube of air will hold in invisible solution depends upon its temperature, and in proportion to the increase of temperature is the amount of moisture; and that every cube of air that enters the house at the temperature of 44°, and escapes at 60°, carries off with it twice the amount of moisture that it brought into the house at 44°. Under such a system, long continued, the air would soon become too dry to support a healthy vegetation, and the soil, or any decomposing or fermenting matters, &c., that may be in the house, will be drained of a great proportion of their moisture, and so, to a certain extent, will the plants situated in such structures; therefore, artificial means to counteract such excessive evaporation should be resorted to. It will also be found, that air entering at 44°, and escaping at 80°, will carry off three times as much

moisture as it brought in, and escaping at 100°, four times the quantity will be subtracted, and so on, in proportion as the temperature is raised; this, if only continued for a few hours in the course of the day, would be found to be most destructive to plants of tender habit.

Therefore, it requires no ordinary share of attention in ventilating forcing-houses in the early part of the season, and every precaution should be taken to prevent the air from entering in strong currents, so as to lower the pre-existing temperature gradually, and at the same time, as far as practicable, to avoid too great an escape of heated air. To prevent the internal atmosphere becoming too dry through the admission of external cold air, it will be necessary to prevent the plants suffering from an undue evaporation, frequently to syringe the walls and floor of the house, which on closing the lights will raise a kindly, moist, growing vapour.

Experiments have proved that each square foot of glass contained in the roof of a hothouse will cool down 1½ cube of heated air as many degrees per minute as the temperature of the internal exceeds that of the external air. So suppose the external air to be 40°, and that of the house 60°, then, for every square foot of glass contained in the building, 1½ cube of heated air will be cooled down 20° per minute, consequently, the moisture this air held in solution, in virtue of its 20° of heat, will be condensed by and deposited on the glass, and will escape by the laps of glass out of the house, or fall in drips, and it will also be found, that the greater the difference existing between the external and internal temperatures, the greater will be the amount of condensation.

At high temperatures the expenditure of moisture is enormous, far greater than at low temperatures, and consequently more likely to prove injurious to the tender foliage of forced plants, or fruits, at an early season.

As an illustration of the principle, he stated, that if we take the roof of a Pine-stove that contains 750 superficial feet of glass, and calculate that every square foot of glass will cool 1½ cube of heated air 30° per minute, with the internal temperature at 65°, then we shall find that 937 cube of air will be cooled 30° per minute; air saturated at the temperature of 65° contains about 6.59 grains of water per foot cube, and at the temperature of 30° it is saturated by 2.25 grains, which gives 4.34 grains of water per cube lost in condensation on the glass per minute; consequently, if the atmosphere in such a house could be kept constantly saturated, there would be subtracted about ⅔ of a pint of water per minute, or about 12 quarts per hour, or at the rate of 72 gallons in 24 hours; this enormous and unnecessary expenditure of moisture must be obvious.

The readiest means to adopt to counteract such effects would be to occasionally syringe the walls and paths, and the hot-water pipes or flues, and all available surfaces, and as the greatest amount of condensation or loss of water occurs at the highest temperatures, he considered the most effectual means to raise a constant supply of moisture would be to place evaporating pans immediately in connection with the hot-water pipes or flues, as, by that means, the greatest amount of evaporation would occur simultaneously with the greatest amount of artificial heat, and also when the drain upon the artificial atmosphere was the greatest. He also considered that it was not prudent to admit one portion of air to enter the house merely to rob the other portion of its moisture; and yet this interchange is, to a certain extent, constantly occurring in badly glazed and badly constructed houses; hence the advantages of well glazed and air-tight houses to retain a humid atmosphere at the least possible amount of artificial heat.

In conclusion, he alluded to the repose that plants require during the night, as it is then, during their temporary cessation, caused by the absence of light, and a low temperature, that they are enabled to recover their elasticity and vigour, and to replace the loss of water and other gaseous matter necessary to their health, and which were given off by evaporation the preceding day. He would, therefore, say that the colder the external air in the night time, the lower the artificial temperature in the house should range, compatible with the safety of the plants or fruit-trees, the temperature to be gradually advanced to mid-day, and then to decline as gradually to the evening. This, he contended,

was the safest, the readiest, and most natural way of producing an artificial atmosphere suitable to the growth of plants in glazed buildings, and that more depended upon the hygrometrical state of the atmosphere in such structures than was generally appreciated.

A Meeting of the Association takes place every Monday evening at St. Barnabas's School Room, Earl Street, Kensington; W. Keane, Secretary.

QUERIES AND ANSWERS.

GARDENING.

RUST ON GRAPES—GANGRENED PEACHES.

"I should feel obliged to you for your advice on the enclosed bunches of Grapes; they all looked very promising in the house until recently. Just as they were going out of flower (some were set), there was a little appearance of Red Spider, and I painted the pipes over with sulphur and water, and a little lime, no more than I have done at other times, only the Grapes were younger this time. Would sulphur cause the Grapes to turn the colour they are? One afternoon I had to close the house very early on account of the boiler leaking, to have it repaired; would that do anything towards it? or, is it a scald in a morning before air was given? The leaves are all healthy, and not one injured. The house has an iron roof. The *Black Hambro's* are worst. There are some *Frontignans* in the house, and only a few berries are touched of them. Some of the *Black Hambro's* are scarcely touched. The thermometer did not rise above 80° the night the sulphur was applied, and on the afternoon that it was closed early no more than 93°. Is it the *rust*? and after the worst berries are thinned out do you think it will spread?

"I have also enclosed two or three *Peaches*, to see if you can make out what is the matter with them. The trees are trained to an iron wire trellis, but it is painted white, but there are places where the rust has come through; would the water after syringing dropping on the fruit cause them to be so? There are many on the tree thus affected. Is it with not having sufficient nourishment for them all?—VIRIS."

[The *Grapes* are affected with the *rust*. It probably arose from your unintentionally over-heating the house, whilst the roots were not sufficiently active to supply the rapid growth induced by the heat. If you thin the berries (if the bunches sent to us are an average sample, two-thirds of the berries may be removed), and if you give the roots some liquid-manure, not much harm will be done. You will not find the disease spread. In thinning, remove all the rusted berries you can, for they are always more or less deformed.

The *Peaches* are dry gangrened, and withered in places. This was occasioned by the same excess of heat, which increased the upper growth faster than could be kept pace with by the less-excited roots. Treat the trees with liquid-manure, and keep down the heat.]

FLOWERING PLANTS TO GROW ON WALLS.

"My garden is surrounded by a low, ancient wall, partly brick and partly stone. Will you oblige me with a list of plants that will grow on the wall? In some parts there will be more soil than in others. In some places the plants will be very dry, and exposed to wind and sun; but in other parts they will be more shaded.—R. B."

[*Linaria Cymbalaria*, with a little Snapdragon-looking flower, will grow on and run along the hardest wall in the country, if you plant little bits of it in the chinks, to begin with. It will soon become a weed. The little old-fashioned Fern called Wall Rue (*Asplenium ruta-muraria*), is another plant that only wants a footing on a wall. Large patches of the roof Houseleek (*Sempervivum tectorum*), will soon establish themselves from very small plants, or portions of it. The little yellow Stonecrop (*Sedum acre*), might almost be chopped like Parsley, and then scattered on the wall, and the pieces would soon establish themselves and

bloom abundantly. The Rock Stonecrops (*Sedum rupestre* and *saxatile*), almost the same. There are several other Stonecrops which, with a little pains at first, would grow very well on walls. We once fixed pieces of the Indian Fig (*Opuntia ficus indicus*), with nails on the eaves of a cottage, and they grew and withstood the frost for years, as well as on the lava of Mount Etna. We have seen *Erinus alpinus* one blaze of pink bloom, on the top of a rotten brick wall, where it sowed itself from year to year. *Wall-flowers* and *Snappedragons* will do the same when they are once established, and that must be by seeds, which will require some care at first. These are what occur to us at the moment; but we shall leave yours an open question for all our readers, and we should be pleased to receive as many facts as possible respecting such and such plants as have been seen to do well on walls and old ruins. We do not require surmises about such as might do.]

PLANTS FOR A WARDIAN CASE.

"You would greatly oblige by informing me, through the medium of your columns, whether you think it would be practicable to grow *Dionaea muscipula*, or *Cypripedium humile*, in a Ward's Case? Mine is of a considerable size—nearly four feet long by two feet wide—and I am desirous of growing some other plants besides Ferns in it, viz., *Marantha zebрина* and some of the *Sarracenias*, &c. I also wish to know whether there is not some small *Palm* which I might grow in it? It is about two feet high. The *Thea* and *Coffea* might be grown in it, I imagine.—T. S. C."

[*Dionaea muscipula* and many *Cypripediums* would grow well in a Wardian Case during summer; but would certainly perish in winter, unless the case stood in a hothouse, and had plenty of air every day. It is during the dark weather of that season that all plants excepting Ferns perish. A Wardian Case might be filled with pumice stone and Derbyshire tufa, the whole formed into rock-work, and dry stove plants inserted in the interstices with the best effect; and they would live and thrive if the case was just kept from frost, and plenty of air given constantly. It is then a miniature greenhouse and very pleasing; but then it is no longer a Wardian Case, as that title is understood.

The only low *Palm* is the *Chamaerops humilis*, and if it was cramped in a small pot, on account of its dry, harsh, slowly-evaporating leaves it would suit your case. *Marantha zebрина* would live for a time, but the young shoots would damp off certainly. *Tea* and *Coffee* trees would be in the same predicament. The young shoots, as they appeared, would perish through damp. You may try every plant you can fancy, and, perhaps, may hit upon some that may thrive in such a close atmosphere, but our experience, which is considerable in the management of such cases, leads us to be very doubtful of any plants thriving excepting *Ferns* and *Lycopods*, and even they require renewal at least every second year.

We are sorry to cast a damp upon your Wardian Case culture, but are compelled to state facts that we know to be true from our own experience. Like every other gardening operation, the plants in a Wardian Case require constant attention, and the plants frequently renewed as they perish, and they (the plants) require a preparation and course of culture on the starving system (*a la Chinois*), to give them a woody, dry texture, in order to bear such a close confinement. We can truly advise you not to expect too much, and to be content with partial success.]

MANAGEMENT OF FUSCHIAS IN A PARTIALLY SHADED GREENHOUSE.

"X. Y. Z, would be obliged to the Editor of THE COTTAGE GARDENER, if he would give him advice in the following matter:—His greenhouse faces nearly north-east, or say due east, consequently, the sun is quite off it by two o'clock, P. M., it being a lean-to house, with opaque back wall. He has at one end, bulbs, Cinerarias, Salvias, &c., in flower; these he shades from the hot sun in the morning, as long as the cold wind lasts. He grows Fuschias at the other end; but they do not wear that vigorous, healthy look which he could desire. The wood and foliage look dry and

hard, instead of soft and luxuriant; they have not been shaded. They look as if they wanted more moisture over the foliage: when is this to be applied? and how is the end of the house to be managed?

"X. Y. Z. finds that if he syringes at the usual time, when the house is closed in the afternoon, that the surface of the soil, the pots, stages, &c., are covered with a nasty green slime, though it is only done once or twice a week; the plants seem to be too dry over head, and yet the slime shews that too much moisture, or else moisture at the wrong time, has been applied."

[Never mind the green slime, disperse it with air, and syringe night and morning, as usual; do not saturate the pots, however. Most likely your Fuschias have not been cut down. If left nearly their full size, they will not present you with luxuriant foliage so early, but you will have bloom earlier. Very likely the house will require to be shaded always for a few hours in the morning; but as other things answer well enough, we do not blame the house altogether. Of course, such a house is not equal to one facing the south, or even the west, but with a little management, such plants as you mention may be grown well.]

TOMATO PLANTS PERENNIAL.

"I have two Tomato plants growing against the back wall of a Vinery. They have been setting and ripening fruit nearly all the winter, and still are going on well. Is it an unusual thing for them to live more than one year, or not? I have struck some cuttings from the same plants, they are going on very well at present; will they go on and bear as well as seedling plants?—A CONSTANT READER."

[The Tomato plant will live long enough, provided you give it heat enough. Few can furnish them with house room so long. We have tried cuttings, and we think you will find them superior to seedlings in fruiting earlier, and not growing so much to leaf.]

LAPSED SUBSCRIPTION.—MOLE.

"In a Cottage Horticultural Society, the Committee, at a meeting, fixed a day for closing the list of members (a much earlier day than in previous years). A regular subscriber to the Society for the two previous years, being in service six miles off, not aware of the new regulation, sent the amount of his subscription to his wife, who lived near where the meetings are held. She had not heard anything of the day fixed for closing the subscriptions, and did not pay the subscription in time. Should this man be excluded, under the circumstances?

"Seeing a mole at work in the strawberry-bed, the other day, I inserted a spud under him, and lifted him gently out to show to my children. He immediately began to burrow in the earth. I turned him out gently twice, when he remained quiet, and in a few minutes died. Can it have been of fright? I am sure I did not hurt, for I wished to save him.—W."

[If the Society's Committee abide by the letter of their resolution, the intending subscriber to the Society has no remedy. Under the circumstances, if you have told us *all* the facts, the committee will act with unnecessary strictness if they refuse to receive the subscription.

We think you must have injured the mole by pressing him between your spud and the soil.]

THE ORANGE WOOD OF MILIS.

I HAD seen orange-trees growing in the open ground. I had even breakfasted one morning under these trees laden with fruit on the shores of Phœnicea, the most adorable spot of the earth, where the sea came murmuring upon golden sands at my feet; but I had never experienced the bewilderment, the intoxication, which accompanied my visit to the gardens of Milis. Here there is nothing but oranges,—not, if you please, fruit placed at regular intervals along the branches, and encompassed by verdure—but huge clumps of thirty or forty oranges dragging the branch

which bears them toward the earth. Do not imagine a group of orange-trees here and there, the perfume of which comes and goes as you approach and leave it; but try to realise the idea of a wood—a veritable forest! As far as the eye can reach under this balmy forest, it meets with nothing but oranges. Oranges in the foreground; oranges in the half distance; oranges gild the horizon! Here, too, we perceive the abuse of riches. You stumble over oranges, lying everywhere about;—you wish to indicate a distant point, you naturally pick up an orange, and cast it in the desired direction; you eat the quarter of one, and, in the very excess of wealth, throw the rest away. The perfume of the blossoms intoxicates you. The mind flies to the gardens of the Hesperides:—you become so confused by the penetrating perfume, that you feel almost delirious; wonder whether you are not yourself turning to an orange tree. You feel the leaves budding upon your arms; you grow weary, with the exertion of bearing so much fruit, and ardently look forward to the picking season. We were in the wood precisely at the time when the peasantry of Milis gather the oranges, to sell them. A gathering is a very simple process. A cloth is spread under the tree; and a man, having climbed the branches, precipitates the golden harvest to the earth, whence an inconceivable aroma arises. To give a simple idea of the extent of this forest, as large as the Bois de Boulogne (I ask pardon for my comparison of those readers who do not know this wood), it took us two hours to trot round it, at a smart pace, on horseback. At the end of our journey, we arrived before the king of the orange-trees. A man can hardly clasp the trunk of this old tree in his arms. Its huge branches stretch boldly out, like those of an oak. It bears an inscription to commemorate a visit from Charles Albert, on the 13th of March, 1829. But orange-trees do not entirely monopolize these enchanted regions. Here and there you come upon glades, where tall poplars protect their noble hosts from the violence of the winds; or upon clumps, where the wild vine creeps round the trees, to breathe the perfume of their fruit, and the clematis falls about in cascades, caressing the breeze with its sweet odour. The earth is sprinkled with Violets, the Periwinkle and Forget-me-not:—it is a fairy land,—something fabulous, heroic, which is alone worth a journey to Sardinia, and well rewards the trouble of travelling over the barren plains and desolate hills of the northern part of the island. The woods of Milis are, in their way, one of the wonders of the world; and I owe to this oasis, loved of the gods, the grateful remembrance of the wildest enjoyment. Of the forty-eight hours we gave ourselves at Milis, I spent at least thirty in the orange woods, gathering in a store of sweet perfume for less happy times, and envying Sardinia so great a treasure!—*Six Weeks in the Island of Sardinia*, by Delessert.

HOW THE IRISH "DRESS" THE POTATO.

THE cabin-boiled potato was dressed in two ways; with and without the bone or the moon, as it is universally called by the genuine Irish. In the latter form, the potato was done to the heart, equally mealy throughout, and bursting its skin with fatness. This was the supper when children and young persons were to partake of the meal; but when much work was to be done, or a long fast to be endured, the heart or central nucleus was allowed, by checking the boil at a particular period, to remain hard and waxy; and when the rest of the potato had been masticated in the usual manner, this hard lump, about the size of a small walnut, was bolted; and in this manner nearly a stone of the root was taken into the stomach of the Irish labourer per diem. Now, although this practice might be bad cookery, it was grounded upon a certain knowledge of physiology. The stomach digested the well-boiled farinaceous portion of the potato within the space of a few hours, and that having been all disposed of, the half-boiled lumps remained behind, and a second digestion commenced to assimilate this portion of food, and convert it into nutritious, life-sustaining materiel; which latter process lasted some hours longer, and thus the cravings of hunger were warded off for five or six hours after the original meal. Every girl in an Irish cabin possesses instinctively, what the most celebrated *chef de*

cuisine never attained to—a power of knowing whether an egg or a potato is “done,” by simply holding it for an instant in the closed hand.

The roasted potato was a delicious morsel, but apt to produce heartburn, and therefore enjoyed only occasionally, and generally out of doors, when the potatoes were digging, or the turf cutting or saving; and then a “caste” was made after the following fashion:—A hole was scooped out of the side of a ditch, and a turf fire lighted therein. When the peat was nearly consumed, the coals were removed with a *maiddie bristie*, or wooden tongs, and the potatoes, enveloped in a layer of moist clay, placed in the hot earth and ashes, with the half-burned turf over them. There they were carefully watched by one of the “pickers,” who called the labourers at the critical moment, and raked out the murphies, which were prepared for eating, not by peeling in the ordinary manner, but by breaking the investiture of pottery in which they were encased, with a twisting motion. Thus dressed, they were remarkably white, dry, and mealy. Children particularly liked them; and we remember a hedge-school pedagogue, after eulogising his class upon their proficiency and good behaviour during their previous hours of study, conclude by desiring them “to be good boys; to take care of their books; to come early next morning; to bring a sod of turf under each oxter, and a pocketful of praties, that they might be reading and roasting all day.”—*Dublin University Magazine*.

OUT OF FASHION.

OUT of fashion; These are, in the world's estimation, words of awful import. Like the wand of an enchanter, they can with one touch divest of all its excellency and beauty, that upon which the eyes of thousands have been fixed in admiration; transmuting it into something that is for the future to be avoided and despised; banishing it from the ethereal regions of taste into worse than Australian deserts, the antipodes of all that is elegant and pleasing. These seem strong expressions; but the influence of this magical decree, extending to things which I had, in my ignorance, once supposed beyond its sphere, was on a late occasion forcibly presented to my mind.

I was walking with two ladies in a beautiful garden, where flowers of all kinds and colours bloomed around, and every breath of air was “redolent of sweets.” My companions were professed florists; and, though not myself possessed of much knowledge on the subject, I listened with pleasure to their dissertations on points connected with it, and examined the blossoms selected for observation. Here the fuschia hung her graceful bells, and beds were radiant with the gorgeous hues of blue, scarlet, and purple verbenas. But it would be in vain to enter on a description of that fair scene where

“The finished garden to the view
Its vistas opened; and its alleys green
Snatched through the verdant maze the hurried eye,
Distracted wandering.”

When my fair associates grew tired of their floral examination, we turned from the gay parterre down a shady shrubby walk. Here, in a comparatively neglected border, some magnificent hollyhocks reared their tall pyramidal forms, thickly covered with blossoms, whose hues, for richness and variety, might rival any of the more delicate flowers which we had been admiring. They attracted the attention of the ladies, who uttered in passing a note indicative of admiration: “They are very fine.” To which the other, who was the owner of the garden, replied: “But do not you know that hollyhocks are entirely *out of fashion*?”

“So they are,” answered her friend, evidently somewhat ashamed of having been detected in admiring what was under the malediction of a tribunal from which there is no appeal, and moving quickly away from the object of *taboo*.

I had now, for the first time, discovered that the influence of the despotic legislator, fashion, extended to the inanimate things of creation. I was already aware of its being exercised over the fine arts, occasionally sentencing them to temporary banishment from society, and recalling them at will. This lesson had been taught me some time before, by hearing a young lady say, in reply to a remark about a newly published poem: “I seldom look at poetry now—it is *out of fashion*,” and by hearing another devoted subject to

the same power exclaim, “My sister has a fine taste for music, but never plays now—it is *out of fashion*.”

These incidents really occurred, and have not been invented for the purpose of illustrating my subject, which I mention, as some may doubt that beings endued with reason could be guilty of the absurdity which they exemplify.

These things, however apparently trifling, led my mind into a train of serious reflections on the probable consequences of this great subservency to public opinion in trifling matters; and its influence on the character, especially of the young, seems to me important enough to merit consideration.

Now, while I should be far from deprecating every change because it was new, and while I would never judge the discoveries of modern days in the spirit of those who would rather be wrong with antiquity than right with innovation, I own that such instances as I have just recorded appear to me too characteristic of the present times, and indicative of a dangerous deficiency in the useful habit of exercising the right of private judgment in trifles, naturally leading to a dereliction of it in matters of importance.

If freedom of thought be the sacred inalienable prerogative of human nature, bestowed upon us by our Creator, is it not evident that we must exercise it to become what we were originally intended for, and to fulfil our high destiny, not only as the children of time, but of eternity? When we surrender our mental powers to be moulded by others, and tamely condescend to think by proxy even about trifles, we are training our minds for that kind of passive subjection which may lead us to embrace error in matters of vital importance. And here perhaps it may be well to observe, that in making these remarks I would by no means be understood to condemn teachableness of disposition, or candour in investigating the opinions of others—qualities perfectly consistent with independence of thought and judgment. I am ready to acknowledge that the influence of fashion in such matters as the preference of a fuchsia for a hollyhock is not in itself likely to affect the interests of society; but I would assert that the mental stagnation arising from the habitual surrender of our minds upon such trifling occasions, is of evil tendency, and leads to our doing the same in things of importance.

Cultivate, then, I say again to my readers, the habit of manly reflection and mental decision.—*Leisure Hour*.

TO CORRESPONDENTS.

BINDING (J. Denny).—You can obtain cloth boards at 2, Amen Corner, but the binding is not undertaken there.

COVENT GARDEN (T. C.).—Arrangements are making to have a report of the prices.

No. 33 (A Subscriber, Guernsey).—Send your real name and address, and enclose the postage stamps.

GENISTAS (A Constant Subscriber).—Mr. Fish answered your query last week.

GRAFTING CAMELLIAS (A Constant Reader).—See our last week's number.

POULTRY HOUSE (A Subscriber).—Divide your lean-to house into two equal parts. If the window is in the middle, the partition may be opposite its centre, and then it will serve to light both parts of your house. Let the part which the fowls must enter when going into it be their roosting-place. If for Shanghaes no perches will be needed. A door must communicate to the inner division of the house, in which inner division have the nests on the floor along the two sides. If you require more minute particulars, either consult “The Poultry Book,” or write to us again, stating the special information you need.


GRAPES (Dan).—Neither the *Mill Hill* nor the *Pope's* are better than the common *Black Hamburg*. Nor do we think either of those two are better than the other. They are both good varieties.

POULTRY HOUSE (E. Janson).—It is useless to sow grass seeds in a small poultry-yard. The fowls eat down the grass seedlings, and by that means and by scratching soon destroy it. You may easily have a small pond made water-tight, either by puddling it with clay, or coating it with Portland cement. Ducklings are great eaters, and are totally unprofitable to those who have to buy all their food. Oats and barley mixed, and barley meal and pollard, all in equal proportions, are the best provender for them. With the barley meal and pollard, Potatoes boiled, and any kitchen refuse may be mixed. The same food, omitting the oats, will do for chicken six weeks old. Give both the ducklings and chicken all the green food you can obtain for them.

HEATING A GREENHOUSE. (Y. Z.).—For one so small, a furnace and common flue will be the most economical, and quite efficient.

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WEEKLY CALENDAR.

MAY 22—28, 1855.			WEATHER NEAR LONDON IN 1853.									
D M	D W		Barometer.	Thermo.	Wind.	Rain in Inches.	Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day of Year.
22	TU	Elodes melanura.	29.581—29.492	62—44	S.W.	30	1 a 4	52 a 7	1 1	6	3 39	142
23	W	Elodes molle.	29.654—29.514	62—38	S.W.	10	0	53	1 22	7	3 34	143
24	TH	QUEEN VICTORIA BORN 1819.	29.760—29.669	62—30	S.W.	08	59 a 3	54	1 39		3 30	144
25	F	PRINCESS HELENA BORN 1846.	29.802—29.760	63—40	S.W.	12	58	56	1 51	9	3 24	145
26	S	Telephorus obscurus.	29.701—29.658	64—42	S.W.	48	56	57	2 4	10	3 18	146
27	SUN	WHIT SUNDAY. KING OF HAN.	29.714—29.639	59—37	S.W.	12	55	58	2 15	11	3 12	147
28	M	WHIT MONDAY. [B. 1819.	29.740—29.634	62—38	S.	42	54	59	2 28	12	3 5	148

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 67.1°, and 45.1°, respectively. The greatest heat, 91°, occurred on the 28th, in 1847; and the lowest cold, 29°, on the 25th, in 1839. During the period 121 days were fine, and on 75 rain fell.

VERY much do we regret to find that the *Horticultural Society's Show* at Gore House, on Wednesday last, was a failure, so far as realising a profit to improve the funds of the Society, and to make up for the losses of last year. We cannot make out whether it was the cold, ungenial temperature of the day, or whether the public did not approve of the change to Gore House Gardens, where there are neither the conservatory, nor the specimens of plants to be seen that there are at Chiswick, but we are assured that there were only two thousand two hundred visitors.

The Queen, Prince Albert, Princess Hohenlohe, and the Duke of Saxe Cobourg, visited the Exhibition as early as half-past ten, but they stayed a very short time.

We shall give a full report next week, but at present must content ourselves with remarking, that amongst the *Roses* exhibited, those shown by Mr. J. Crawley, Mr. A. Rowland, Mr. Lane, and Mr. Francis carried off the palm. The show of *Azaleas* was good. Mr. Lane, again, was amongst the foremost competitors; while the plants of Messrs. Frazer were hardly inferior. The *Pelargoniums* of Mr. Dobson, of the Woodlands Nursery, Isleworth, and Mrs. Bruckmaster, of Clapham Park, attracted most attention. For *Orchids*, the large gold medal was carried off by Mr. C. B. Warner, the second by Mr. H. B. Ker. The show of *Rhododendrons* was not large. Mr. Lane again carried off the principal prize in this department; the second being gained by Mr. Gaines. There was a fair show of Stove and Greenhouse Plants. The Banksian medal was awarded to Sir J. Cathcart, and the second medal to Sir E. Antrobus. Amongst the most prominent exhibitors of *Fruit* were Lord Boston, and Sir S. M. Peto, and the gardeners to her Majesty and the Dukes of Sutherland and Northumberland. The greatest curiosity in this department was a fruit of the *Mangosteen*. The tree from which it was taken is at Sion House, and is noticed to-day by Mr. Appleby.

The bands of the Coldstream Guards, of the Grenadier Guards, and of the 1st Life Guards, stationed in different parts of the grounds, performed during the afternoon a selection of popular music; and shortly before six o'clock the three bands united, and gave in very good style the overture to *L'Etoile du Nord*, and a selection from *Figaro*; "Partant pour la Syrie," and "God save the Queen" following, concluded the performance.

It is no part of our province to descant upon the military operations in the Crimea, but it is quite in unison with our objects to express the pleasure we feel in finding that the Government are adopting measures to promote the health and comfort, both of men and horses during the campaign, or campaigns, which may there occur, by calling in the aid of farming and gardening.

Messrs. Page and Co., Nurserymen and Seedsmen, of Southampton, inform us that they have sent a large quantity of seeds, in cases of four or five cwt. each, to the Crimea, in the Royal Mail Steamer, *Medway*, which left that port on Wednesday last. The order was forwarded to them by Capt. The Hon. Henry Keppel, through the Admiralty, and included Permanent Grasses, Clovers, and Vegetables of every description, sufficient to crop many acres of land.

This is all as it should be; and thus preparing for Clover and permanent Grass crops, is a very significant hint to our Muscovite enemies that we do not intend to evacuate the Crimea very speedily; and that whilst we stay we purpose making ourselves comfortable. Balaklava and its vicinity will make as admirable a rallying point as did the lines of Torres Vedras for our army in Spain. We happen to know that some of our officers there took to gardening as an amusement, and if they do the same in the Crimea, we ought to be no more surprised at hearing of Balaklava Horticultural Shows, than we are to hear of Balaklava Races!

THE May Meeting of the *Entomological Society*, on the 7th inst., was numerously attended, in consequence of the ballot for an associate having been fixed for that evening, considerable difference of opinion being known to exist as to the advisability of the introduction of this class of members.

It may be here proper to state, that when the By-laws of the Society were revised on a late occasion, several of the members (anxious to extend the benefits of the Society to a class of persons who had hitherto been debarred therefrom by the expenses of admission and annual payments, but who, although in humble circumstances, had shown an ardent desire to further the interests both of the science itself, and the Society) obtained the passing of a By-law for the admission of ten associates, who should have free permission to attend the meetings, and make use of the cabinets and

library, but without any power of voting. Such persons to be first approved by the Council, and subsequently ballotted for by the Society. Other members of the Society, however, have been of opinion that this plan (adopted in most other Societies) was inexpedient, and we regret to have to report, that by their combined exertion they succeeded on the present occasion in rendering the By-law a dead letter. The candidate for admission (whose name we withhold for delicacy's sake), not having obtained a sufficient number of votes to entitle him under the By-law to admission.

It is certainly to be regretted, that where the cultivators of a science are comparatively few in number such illiberal prejudices should exist against the working student, and we would suggest to those gentlemen who opposed the election in question, that if they would only look at the most perfect association in existence—that of the Hive Bee—they would see there, that the working individuals are as essential to the well-being of the community as the Queen herself.

Various rare British insects were announced as having been presented to the Society's Cabinet, since the last Meeting, by Messrs. F. Bates and F. Plant, of Leicester. Donations of books, also, from the Royal Society, the Entomological Societies of Paris and Stettin, the Natural History Society of Vienna, &c., were announced, and thanks ordered to be given for the same.

Mr. Westwood made some remarks by way of rectification of misstatements lately published, concerning the genera *Stenamma* and *Coniortes*. He also stated, that on the 16th ult., being the only genial spring day we have yet experienced, he observed numerous specimens of the fly produced from the Gooseberry grub, and that he had succeeded in capturing the males, which had escaped the observation of Messrs. Curtis, Stephens, and Rusticus of Godalming.

Mr. Douglas called the attention of the meeting to a Memoir recently published by Dr. Boisduval upon the *Silk Moth*, introduced during the past year into the South of Europe from India, and which had been considered to be the *Saturnia Cynthea*, but which Dr. Boisduval regarded as distinct, and which he accordingly named *S. Ricini*, the larvæ feeding upon the Castor oil plant (*Ricinus*). Mr. Douglas also called attention to a Memoir by Herr Horning, on the Transformations of the Genus *Phyceta*.

Mr. Stainton noticed a valuable Bibliographical Memoir for the years 1851 and 1852, by M. Bohemann; and a new work upon the *Coleoptera* of France, commenced by M. Leon Fairmaire.

Specimens of the rare moths, *Lophopteryx cucullina* and *Carmelita*, reared from the egg state, were exhibited by Messrs. Creed and Sam. Stevens.

Mr. Newman exhibited several rare *Coleopterous* insects from New Holland. Also, a remarkable variety of *Cynthea Cardui*, captured at St. Lawrence, in the Isle of Wight, by Mr. G. Ingall, and which has been described in the "Zoologist." Also, specimens of *Athous Campyloides*, a new British species of *Elate-*

ridæ, which has been captured at Ramsgate, upon Elders in flower, by Messrs. Edward Foster and Dawson.

Some rare British Lepidoptera were also exhibited, including *Endromis versicolor*, from Fincastle, by Mr. Foxcroft; and *Cloantha perspicillaris* and *Argynnis Lathomia*, from Hampshire.

Mr. Stainton exhibited some leaves, forwarded from India by the Rev. Mr. Atkinson, infested by the mining larvæ of three different species of *Lithocolletes* (a genus of minute Moths), and which were interesting as proving that Micro-Lepidoptera occurred in tropical countries; although, hitherto, their existence had been doubted, having been overlooked by collectors. Mr. Curtis contended, however, that minute Lepidoptera were rare in warm climates, as he had scarcely found any during many weeks' excursion in the South of France. — Mr. W. W. Saunders stated that he had certainly observed leaves encased by these insects in India; and Mr. Wallace had collected 700 species of Micro-Lepidoptera during his short residence in the Eastern Archipelago.

Mr. S. Stevens exhibited specimens of the *Dicrancephalus*, sent from China by Mr. Fortune, and which had been considered as distinct from *D. Wallichii*.

A paper was read by Mr. H. Doubleday, containing the description of a new British *Noctua*, lately captured in North Wales, which had been erroneously considered to be the *Spalotis Valesiaca*.

A paper by Mr. Lubbock was also read, containing descriptions of Entomostracous Crustacea of South America, belonging to the genera *Cypris*, *Diaptomus* and *Daphnia*.

The Secretary announced that the Society had received a notice of the recent death of *M. De Haan*, the distinguished entomologist of Leyden, and one of the honorary members of the Society.

It was also announced that a new part of the Society's Transactions was ready for distribution. Likewise, that Mons. Yersin, a Swiss entomologist, was engaged upon a monograph of the *Gryllidæ* and *Locustidæ*, and that he desired the communications of specimens from English collectors.

IVY.

To have Ivy in good order, in dressed grounds, where everything bears, or ought to bear, the stamp of the gardener's art, it should be cut in every year about the end of April, but this being such a very late season, it is only just the right time now to cut the Ivy; at any rate, there is nothing yet lost for the delay this season.

If Ivy was properly managed it would live a thousand years, but there is hardly one place in a thousand where it is "done" properly.

The great beauty of Ivy growing against a house, or on the walls, or buildings about a garden, is to look as young at the end of a lifetime as when the heir was born; but Ivy covering an "old ruin," or growing up round trees, is never "in character," if it looks young, or while it is young.

Now, before people heard of "dressing Ivy," the mind of this nation, at least, was pre-possessed or pre-occupied with the beauty of Ivy in its natural "whims" on such ruins and old trees, and it is very difficult indeed to change the whole mind of a country. Writers upon

gardening have been at it these thirty years, and yet you see very little done to define the difference between dressed Ivy, and the poet's Ivy, on the "dismantled castle." I have seen a Yew hedge five-and-thirty feet high, at Boyton, beyond Salisbury, the seat of the late Mr. Lambert, but I have seen Ivy higher than that, and as even, on the face of it, as this page. I think the best kept Ivy I every saw was at the "Priory," near Edgeware, a seat belonging to the Marquis of Abercromby. Mr. Foggo, a friend of mine, had the management of this Ivy for many years. You might call at the end of every ten years, and find the Ivy there still looking as young as at the first. But the first thing to learn about dressed Ivy is to forget that there is any thing like naturally-grown Ivy in the world, and getting rid of the idea of covered ruins, and all poetic fancies about Ivy. It is very difficult for one to manage it so as to make, as it were, a coat of paint to the wall with it. When Ivy is well done, however, no paint will ever equal it to hide defects, or to secure the wall from the weather; but without good management Ivy is often a dangerous covering to some walls, indeed to most walls, as, if it is allowed to grow out naturally, on reaching the top of the wall the rain will beat against it, run down the branches, and reach the wall, then lodge in the mortar seams, this softens the mortar, the roots then get firmer hold of it, and from that time destruction goes on, deeper and deeper, by every succeeding shower, till the wall is a ruin.

The other side of the picture shows the Ivy leaves throwing off the wet from leaf to leaf, as the slate upon the roof, and all below the leaves is dry, the mortar is thus secured from the weather, and the face of the bricks or stone is so thickly covered by the roots of the Ivy, in addition to the covering of leaves, that the alternate actions of wet and dry, frost and fair weather, have little or no effect upon it. In short, there is nothing known to us which preserves buildings so effectually as well-kept Ivy, but *it must be well kept from the beginning*. It must have its yearly pruning, just as much as the Peach-tree against the wall, and that from the middle of April to the middle or end of May, according to the season, and also according as other pressing works will allow of, but the annual pruning should not be delayed beyond May. Another looking over will be necessary during the last half of July, but under a regular system this July trimming will be a comparative easy work.

Let us now begin at the beginning. In the year 1825, I planted some hundreds of cuttings of Ivy, in May, against the ruins of an old church, or monastery, in the bottom of the pleasure grounds at Altyre, near Forres, and nine out of ten of them took root. The cuttings were from nine to twelve inches long, and were planted as Mr. Rivers directs for Boursault Roses: two buds only left out of the ground. The "Burn" ran close by the old church, and the cuttings were watered very often all that summer; about a thousand yards of Box edgings were planted that year in that garden, without a single root, and, without, I believe, the death of a single slip. Cuttings of Ivy will succeed, *with proper care*, if they are put in any day from the middle of September to the end of May; and, for aught that I know to the contrary, if put in any day in the year.

Rooted plants make the next step, and the next; the last step of all being Ivy in pots, from six to fifteen feet long or more, to cover a wall at once. I may observe, in passing, that from the middle to the end of May is about the best time in the year to plant Ivy out of pots. At that time there is no time lost; the bearded fibres will not wither by standing idle—they cling at once to the wall, "if"—but few things come or go without an "if"—there are two ifs here—if the new ivy is watered thoroughly and liberally for the first two months, and if the shoots are properly nailed; but nailing up newly

planted Ivy of this length is different from all other nailing, and very few attend to it.

No matter how long the shoot is, *every inch of it* ought to touch the surface of the wall, and that can only be done by using four times as many nails as would nail a grape vine of the same length. When long ivy is planted in winter, or early in the spring, and the shoots are merely fastened to the wall, the work is like "love's labour lost,"—the small branch fibres dry and perish, and the stem never gets a proper hold on the wall; it bulges out, here and there, and when it is old the chances are that it will *draw* the wet to the wall, and be an eye-sore to him who would have a smooth face of leaves.

There is no plant which pays better for good watering for the first three or four years than Ivy; Salvias and Chrysanthemums are the next to it in that respect. As long as Ivy clings to the wall, nine persons out of ten think it is "all right;" but it is not too much to say, that for the first ten or fifteen years about two-thirds of the last year's growth ought to be pruned off in May. There is not a plant we grow out-of-doors, from a Gooseberry to an Oak, or in-doors from a Verbena in a cottage window, to an Orange tree in the Crystal Palace, but requires part of the pruning or cutting to consist of "thinning-out." The Ivy is the only plant I can think of whose management seems, by common consent, an exemption from the universal rule; and yet, with the single exception of the Gooseberry-bush, no plant in the catalogue suffers in after-years more from the neglect of early thinning-out than the Ivy. The true management of dressed Ivy has never yet been written in our language, nor shall it be to-day, or to-morrow either. Suffice it to say, that the question is opened, that the necessity of the thing is made apparent, and that the thing itself is the easiest thing in the world to manage, if it is begun in time, and is continued on a regular system of yearly pruning, thinning, and stopping.

"In time," means, in the management of Ivy, any period within twenty years after the Ivy is planted. The Ivy in good ground is so prolific of growth during the first twenty years, that you might cut away eight parts out of ten of it without hurting or diminishing its value, as a protecting plant, or conservative properties.

There are some few who can well afford to go to a great expense about the management of their Ivy. I know some of them who make this a hobby, and pay more attention to it than they do to the lawn before their windows; but their rules would not suit the great bulk of the world. I shall, therefore, give the rules which I would follow myself, and I know they will answer just as well as the most expensive ways, and give very little trouble.

As long as young Ivy is below the eye, or under five feet in height, none of the leaves need be cut off to see how it goes;—when you require a ladder to examine it, to cut away all the leaves is the cheapest way; but here you must differ from those who make it a hobby, for they never allow that.

When a large surface is to be cut, the best instrument for that purpose is the one you are most accustomed to; some take the hedge-shears, and cut as they would clip a hedge; some use the knife, or the sheep-shears; and some use the switch hedge-bill, which is my own favourite tool; it is like a Peach pruning-knife, with a cutting edge thirty inches long, a socket ten inches long to receive a handle four feet long. This any blacksmith could make from the description, and it is the most powerful of all edge implements we use in gardening; it ought to be sharp enough to split a hair, and a little practice will soon bring in the hand and eye to use it properly. Every hedger in Scotland uses this tool, in some shape or other; but one seldom sees it in England. I have bought them in London, however, and could cut

with it as much as any three men could cut with any of the shears' family.

When the young growth of the Ivy is from one to three inches long is the exact right time of the year, or of the month of May, to thus cut off all the leaves on an Ivy wall. If done sooner the wall will look bare much longer in proportion; but it might be done without injury to the last day of May. When the leaves are down, begin to thin the younger branches from the top of the wall, and work downwards, taking away at least one-half of all the shoots that were made last season in the oldest Ivy. Young Ivy extends and multiplies according to the situation and strength of the ground in which it grows. It may grow so slowly, or so poorly, that very few shoots can be spared; and it may be so strong that four branches may and ought to be cut out, in order to give sufficient room for the fifth; so that no positive rule can be laid down as to how much ought to be cut out. As a general rule, all the main shoots ought to stand four inches asunder; and the whole of the wall, or height, should be covered before any side-shoot is left crossing. Tried by these two simple rules, there are not many well-kept Ivy-walls in a parish. After the space is filled, the thinning of the shoots must be guided by the strength of the plants, or rather of the roots; if the leaves seem too crowded one year, the shoots ought to be left thinner next May; or if the leaves look too far apart, and do not hide every inch of the wall, the young shoots much be left closer at the next pruning.

Ivy should never be allowed to make breast-wood on a wall, or on the top of a wall, if it is intended as a protection to the wall; but when ornament is the object more than the safety of the wall, a wall of any height under ten feet may have a broad coping of tree Ivy, which will flower and fruit. The bees are as fond of Ivy blossoms as they are of Mignonette, and the birds never let a berry to waste in the country. This Ivy coping, however, should not be allowed to spread so far over the Ivy side as to throw the wet altogether from the face of the wall; when it is so allowed the Ivy wall soon begins to get bare and more naked year by year.

D. BEATON.

MANY QUERIES.

"I RECEIVED a plant of *Poinsettia pulcherrima*, in November, about two feet high, but it was so much bruised by carriage that I was forced to cut it down. It sent up a short, sturdy shoot two inches high, with a few flower-buds nearly open, but it has come to a perfect stand-still this month back; the few leaves have become a bright scarlet. Am I to insist on it flowering; or is its flowering season past? Will more heat be necessary to start it again; and what time?

"I have also a few plants of *Gardenias*, *Hoya Bella*, *Lantana cruciata*, (?) *Stephanotus floribundus*, *Lycopodium Braziliensis*; a few hints on the management of them will oblige. They were all put in fresh pots in November. Will *Gardenias* and *Azaleas* strike from cuttings?

"I have a lean-to greenhouse, heated by a flue, with a division in the centre of the house; so that I can keep the one end warmer than the other when necessary. Shall I be able to grow these plants along with other plants without fire-heat during the summer season?—A READER."

I will do the best I can with the above in a small compass; though, considering the number of correspondents, it is hardly fair to make so many inquiries at once.

POINSETTIA PULCHERRIMA.

The true flowers of this plant are nothing to look at; the bright crimson bracts that surround the head of

bloom are the great attraction, and for them the plant is grown. The natural time for the plant flowering is in early spring, and in winter from the beginning of November. The finest heads of bracts are formed at the points of shoots grown during the previous summer. It is not common that these flowers and bracts should appear at the sides of the shoots. The reason, in the present case, was no doubt owing to the plant being bruised, and not blooming in consequence at the points. The stems had been so stored with matured sap, or organisable matter, that it found vent for itself by a side bud, instead of the large terminal one. I saw an example of the same effect in a large plant lately, at Hardwicke House, near Bury St. Edmunds. The plant had flowered at the points in winter; but the stems had been left remaining, instead of being cut back in spring. A few leaves remained at the points to keep up the growth, and several smallish bracts had broken out on the sides of the shoots.

Beautiful as this plant is, it has the objection, that you never can make it compact and bushy when grown in the usual way; as, other things being equal, the most splendid bracts are produced at the points of the strongest, best-ripened shoots. To the lovers of compactness, the best plants, therefore, present, at best, but a leggy, drawn up appearance. To counteract this leggy look, I once or twice tried an experiment, which I will mention, that others may improve upon it, or let it alone. A strongish plant was cut back, in March or April, so as merely to leave a bud or two at the base of the shoots of the previous season. From those that started, from four to six shoots were chosen, equal in size and strength, and so treated as to retain much of the same similarity, as respects vigour, during the summer; having received, at first, the assistance of a hotbed, and by the middle of June kept warm, close, and moist, in a cold pit. By the middle of September, more air, less water, and fuller exposure to sun, were given to ripen the shoots, and by the end of October the ends of the shoots were nipped off, and bleeding stopped by daubing the parts with quicklime. In a week or so, a string was fastened round the rim of the pot, and another string attached to the point of each shoot, bending each in a semicircular form to the rim of the pot. In a week, or a fortnight, these plants were transferred to an average temperature of 60°, and in a month, or so, little shoots or spurs broke out from the buds, chiefly where the strain was the greatest. Each little spur terminated with its flower and its surrounding crimson bract. The bracts, however, were so small, and the place in which they appeared so uncertain, that I have never repeated the experiment. If such shoots could be made to present a crimson clothing throughout, the plant might be made more interesting for small houses where there is little head-room. There is little doubt that these bracts of crimson leaves appearing on our correspondent's plant were produced in a manner exactly analogous, though in his case from accident, instead of design. To obtain fine, large, crimson bract leaves, there is no mode I know of equal to obtaining them on the points of well-grown, well-ripened shoots of the same season's growth. The following, therefore, may be deemed an epitome of their successful culture.

As soon as the plants have done flowering, say in December or February, they may be removed to a cool, airy position, commanding an average temperature of 45° to 50°, and allowed to get rather dry; then, in a week or two, prune back the shoots to within a bud or two of their base. This will apply to plants one or two years old, and as old as you like, only that finer bracts are obtained from plants of that age than from older ones; and as propagation is easy, there is no temptation to keep old plants. After pruning, keep the plants in much the same temperature, and dryish, except a dusting

now-and-then over head, until the buds swell, and the young shoots appear. Then water, and increase the temperature gradually to 60°, 65°, and even 70°, with a rise from sun heat. By the time the shoots are an inch or two long, the pot should be examined; what is possible of the old soil removed, and fresh added in its place, and a size larger pot given if deemed necessary, and the plant be kept in a moist, shady atmosphere until growth is freely proceeding; temperature from 60° to 75°. The soil best suited is equal parts of peat earth, turfy loam, lime rubbish, with pieces of brick, and dried old cow-dung, or leaf-mould. By the end of June the plants will do in a cold pit, or a greenhouse, kept closish, and more air and full light be given by the end of August, after which period the dryish atmosphere must be continued, and as much water at the roots as will just keep the plants from flagging. When moved from such place into a house ranging from 55° to 65°, and moisture communicated to the roots, the flower-bracts will soon appear. When fairly expanded, or nearly so, they may either remain, or be taken to ornament the greenhouse. In an average temperature of from 45° to 55° the foliage will stand lower than that; it will get yellow and droop; but still the flower-bracts will be very striking objects when appearing merely by their heads surmounting other plants well clothed with foliage. The cutting back and resting have previously been referred to. One reason for having the plant cool and dryish at that season is to prevent the plant, or the cuttings, exuding their white, thick juice too freely. Care must also be taken that that juice does not touch any cut or scratch on the hands or elsewhere.

The propagation is a simple matter. Every bud on these young shoots will grow just as in the case of Vine shoots. It is customary to make a cutting with several buds, cutting through one at the base, and having two or three above for forming the plant. These inserted firmly in sandy soil, and helped to a temperature from 60° to 70°, will root and grow away rapidly, and produce nice heads of bloom and bracts the first season. Pruned back, and treated as above recommended, they will be better the second year, and after that, if fine heads are wanted, the plants had better be discarded.

I have grown these with much less attention than is recommended above, but something like similar care is requisite, if bracts are required at all proportioned in size to those umbrella bonnets with which the ladies have learned to conceal their faces.

GARDENIAS,—POTTING, &c.

You could not have potted all these plants in a worse period than in November, unless it might be in a cold December. One sound principle in potting plants can hardly ever be departed from with impunity, is to pot, so that the roots will occupy the fresh soil before the cold, short days come. The best time for potting, as a general rule, is just when after flowering and pruning the fresh growth is freely progressing. The next best, with many things, is after the flower-buds are formed—doing it so carefully as not to cause them to shrivel and fall, and so early as to have the roots kissing the sides of the pot through the new soil before the winter comes. Supposing the plants to be in good order, the following may be considered the synopsis of treatment. Plants kept airy and rather dry at the roots, and in a temperature about 45° during winter. A few degrees less for short intervals will not hurt them. Increase the temperature in spring, by placing the plants in a hot-bed supplied with sweet fermenting matter. Here, at first, merely set the plants on the surface, and give almost as much air as they previously had. In the course of a week or a fortnight, provided the bottom heat at the depth of the pot does not exceed 75°, or only

exceeds by a few degrees, plunge the pots nearly to their rims, and let them have a top temperature of 55° to 65°. Give a due portion of water at the roots, and syringe over head with water about 70° in an afternoon; smoke to destroy fly. As the flower-buds swell, raise the plants by degrees out of the plunging material; give more air by degrees, so that the plant may maintain its blossoms in good condition, in a cool stove, or greenhouse, or a window. After blooming, keep the plants close and warm, with a moist atmosphere, in a pit, and expose them almost wholly to the open air in September, or with merely the protection of glass, to throw off heavy rains. The more sun they get in the autumn, the better will the flower-buds be set; the more cold will they sustain in winter uninjured; and the sooner will the flower-buds obey the excitement given them by the moist hotbed in spring. Not but the *Gardenia* may be managed very well without the hotbed, but it is a desirable help for them, and many plants besides. A bark-bed and bottom-heat will cause many plants to assume a vigour and beauty it requires great labour otherwise to produce. Young shoots slipped off when two or three inches in length, and inserted in sand over sandy loam, covered with a bell-glass, and plunged in a bottom-heat of a sweet bed of fermenting matter, strike readily. The soil most suitable is peat and loam at first, increasing the proportion of the loam as the plants get older.

HOYA BELLA.

This is really a beautiful thing; and what Hoya is not? I rather like the old *carnosa* the best of all, but I should be glad to make room for every one of them. If the plant is young, a little bottom-heat will do it good, and make the shoots grow quite fast, and very likely a few flowers may be procured during the season. After the second and third year the plant will bloom freely. During the summer it will relish any temperature you like to get it, provided there is moisture in proportion to the heat. From 65° to 80° may be set down as a good range. By Midsummer it will be showing its pretty bunches of bloom. Towards autumn keep it more airy, cooler, and drier. Let it be dryish rather than not in winter, and if the temperature is not often under 50° it seems to like it all the better. Peat and loam, with a little charcoal and rough lime-rubbish, of which broken bricks form a part, answer well. Small pieces of the shoots are easily propagated by inserting them, after being dried for a day or two, among roughish sand, and plunging in bottom-heat and shaded. I think I forgot say that the *Poinsettia* cuttings, though the stems be rather dry, should remain a day after making before inserting them, that all the exuded fluid may have dried up.

LANTANA CRUCIATA.

I presume this is the orange copper-coloured *Crocea*. The whole group requires similar treatment, and are very showy, though, to my taste, the odour of any of them is anything but agreeable. They grow freely in peat and loam. If kept in a cool stove during winter they preserve an evergreen character. When kept in a temperature of 45°, and lower, they lose their foliage. I prefer the cool treatment for them in winter, keeping the plants, like Fuchsias, &c., under stages, &c. When any forcing-houses are started in spring, the plants are pruned back to within a bud or more of the base of last year's shoots. The peat is then frequently sprinkled with warmed water, about 75°. Water is also given at the roots, and the plants may enjoy a temperature from 55° to 65°. Before long, the buds will break all over, and then is the time to shift the plant, replacing it, if large, in the same sized pot, and with fresh compost. Thus encouraged, the shoots will lengthen freely, and,

before long, show flower-buds at their many subdivided points, when the temperature should be lowered, more air and full sunshine admitted, until by the first of June, or earlier, the plants will be fine objects in an ordinary greenhouse. During the growing period in spring, and also when flowering in summer, they will drink in manure-water most greedily, provided it is not given too strong. This plant is seldom annoyed with insects. Young side-shoots, two or three inches in length, slipped off close to the older wood, dressed at the base, and inserted in sand under a bell-glass, will strike in a few days, and make nice little plants the first summer. It is seldom advisable to have plants above two years of age. In warm places, many of the species, or varieties, will do out-of-doors in summer, but I have always found the winds here too strong for them.

STEPHANOTIS FLORIBUNDUS.

The various modes of treating this plant have been largely dwelt upon. The chief points are these—Peat and loam for soil; winter temperature from 45° to 55°, the less below 50° the better, and kept rather dry; prune so as to have the young shoots rather thin in autumn or spring; sponge off every trace of black or insects; increase the temperature in spring, until it reaches 70°, with a rise of 10° or 15° from sunshine; syringe over head until the flowers appear, then discontinue, and inure by degrees to more air and sunshine. When done flowering, a little close heat will do it good, before hardening it off for the winter.

LYCOPodium BRAZILIENSE.

This is a very pretty moss of the easiest culture, provided you give it peat and loam to grow in; a shady place in which to secure itself from a scorching sun; abundance of water, curtailing it only in winter; a moist atmosphere, and a temperature seldom under 50°, and frequently reaching 60° in winter, and mounting up to 70° and 85° in summer.

HOUSE WITH DIVISION.

You will not be able to grow all these plants, even in summer, along with other greenhouse plants, but by keeping them at the time specified above by themselves, in one end of the house, and next the furnace, of course, you will obtain sufficient heat for them, unless in cold, stormy weather, from the first week in June, until the last week in September, without lighting a fire, and merely by curtailing the amount of air, and keeping a moist atmosphere. In very cold, dull weather, in June, a fire, though going through both houses, would do no harm, as you could just give more air in the cool part. From what has been said, you will be at no loss to know when any of these plants may be safely trusted in the cooler part. Nothing answers better than a cold pit for growing many tropical plants in summer, because, merely by diminishing the quantity of air, we can give, whenever there is sun, what temperature, and what amount of moisture in the atmosphere we like. The only drawback, in such circumstances, is a track of cold, dull weather in June and July, but then, had we our flue, there would be no difficulty. R. FISH.

JOTTINGS FROM MY NOTE BOOK.

My memorandums are becoming numerous, and if I allow them to remain too long in my book, I fear some of our readers will not reap any benefit from them, for the season for so doing will be passing away. I mentioned once before, that I never called at any place but I kept my eyes and ears open too, to catch anything

that would suit the pages of THE COTTAGE GARDENER, and I see my practice is followed by my good friends, Mr. Beaton and Mr. Fish, so that amongst us, our readers may rest satisfied that there will nothing escape that is likely to be useful or worth knowing. Many other contributors do the same, so that we may fairly say, that it is not our fault if THE COTTAGE GARDENER does not know every point in practice, every new fruit worth growing, and every new plant worth striving to obtain.

It is my opinion, that a history of all the gardens in Great Britain, containing a report how they all are managed, what they contain, how hardy fruits prosper in different localities, what trees and shrubs are hardy, how hothouses are heated, with a notice of the scenery, and hints for improvement; in fact, the state of gardens and gardening in this country at present, would be a valuable mass of information, and would be a standard work that would be well reviewed by the public. Not a mere compilation, but an actual survey for that purpose. We have no such book in existence. The only approach to it is the short notices in "Loudon's Encyclopedia," and a small volume entitled "Beauties of Middlesex," by Mr. Keane.

THE MANGOSTEEN.

I very lately visited the gardens at Sion House, and my first inquiry of Mr. Iveson was, "Has the Mangosteen ripened its fruit?" To my great satisfaction he answered, "Yes! We gathered one a few days ago." "Was it good?" "Yes, excellent; but you may see one now on the tree nearly ripe." To the Tropical House we wended our way, and there, sure enough, the fruit hung on the tree. It is about the size of a fair Ribston Pippin Apple; but quite round, and dark chocolate colour. Mr. Iveson said he was present when the ripe one was cut into. The rind is hard, and the flesh inside rich and melting; the flavour, that of the Pine-Apple and Grape combined. It keeps well, for he said he expected to be able to exhibit one, or more, at some of the exhibitions. Probably at the Crystal Palace.

We cannot, at present, say whether the Mangosteen will ever be grown so common as to be on the tables of even the wealthiest of our nobility. It depends greatly upon the next year's produce. If this tree, now that it has begun to bear fruit, yields freely another year, then we may hope it will become more common; but the great age and size it appears to require, in addition to a lofty Tropical House, and great heat, renders the matter of its extended culture rather doubtful.

MUSA CAVENDISHII.

The house occupied with the *Musa Cavendishii* variety, alluded to in a former communication, was in good condition. Two or three of the *Musas* had produced enormous spikes of fruit on plants a year old, and not more than five feet in stem. There can be no doubt but this fruit can be grown successfully in even a moderate garden; but then it requires a house to itself, as it has at Sion. There is something noble in the appearance of the plants, for they cannot be called either trees or shrubs.

VINES IN POTS.

The Vines in pots that I mentioned as being very strong from eyes the February preceding are now in fruit, and had a very heavy crop upon them, with bunches of fruit above the average size. They are grown in a low house, formerly used as a pine pit, and completely covered the roof, producing fruit from the front to the back. To cause the fruit to swell off well, Mr. I. has laid some of the longest into the adjoining pots. Into the earth in those pots they were

sending strong roots, which, no doubt, would cause the berries to be much larger. When I saw them so fine, and knew the Vines were only a year old, I could not help saying, Who need be without Grapes in the shortest possible time. All that is required is a low house or pit to grow the plants in, and another to fruit them in. Certainly, even in a commercial point of view, this method must be a profitable one.

FORCED STRAWBERRIES.

The visitors at the London shows have often admired Mr. Iveson's pots of Strawberries, they were so fine and large. I caught the secret how they were produced, and I was informed that the great growers for Covent Garden have adopted the same plan. It is done this way,—the plants are put into the pots in the usual way that first runners are laid into small pots, and when sufficiently rooted, they are repotted into their fruiting pots. In the autumn, they are laid on their sides one above another, bevil fashion, and there remain till they are required for forcing; this gives them a check, and keeps the roots dry and the plants fresh and green. Previous to commencing forcing, a pit is filled with the autumn dropt leaves quite up to the glass, and as soon as they have become warm, the Strawberry-pots are plunged up to their rims amongst the leaves; the consequence is, the plants enjoy a moist, gentle bottom-heat, are close to the glass, and are thus in the best possible condition and position to grow and produce not only large, fine fruit, but plenty of them. To cause them to swell to their full size at Sion House, the quantity is reduced by thinning the first blossoms, and cutting off all those that are produced late. Whoever has the means should adopt this mode of forcing this handsome, grateful fruit, always acceptable, but more especially during the early spring months. To have a succession, they (at Sion), when the fruit is swelled and just beginning to colour, remove that batch out of the pit, and place them on shelves in the early forcing-houses, refilling the pit from the store-heap.

SALVIA GESNERIFOLIA AND HUMEA ELEGANS.

The large conservatories were very gay with Camellias, Acacias, and other free early-flowering plants; among them, I was particularly struck with several large specimens of *Salvia gesnerifolia*, covered with the long spikes of their glowing, large, scarlet flowers. Mr. Fish has written very eloquently in praise of this fine plant, and I wish he had been with me to see it so well grown and properly flowered. I noted a considerable number of the graceful plant, *Humea elegans*. We usually see it grown with one stem, or, at most, with two or three side-branches; but here they are enormous bushes, with seven or eight leading branches, growing in twelve and sixteen-inch pots, yet all single plants. The way this is accomplished is to stop the leading shoots when young, and to stop them again when the shoots have made some progress, potting them frequently, and giving them free doses of liquid-manure. They must be truly graceful objects when they produce their numerous spikes of flowers gently waving with every breeze.

EARLY SPRING FLOWERS.

I was pleased to find that the pages of our periodical are read in the gardens at Sion, and that some of the matter in it is carried out here. They are collecting these lovely harbingers of summer in considerable numbers. Many of the flower-borders are of the mixed kind, producing flowers all the year. The early bloomers are being planted very freely; hence, next year, when they have become established, they will be very interesting. Formerly, some of the borders in the flower-

garden were thickly planted with dwarf Rose-trees, and allowed to grow rather tall, the consequence was they hid, in a great measure, the extent of the garden. This season they are all pegged down close to the ground, which is, I am certain, a great improvement.

MAGNOLIA GRANDIFLORA AND MAGNOLIA GRANDIFLORA EXMOUTHII.

These in the arboretum are perhaps the largest trees about London. I was sorry to see the late severe winter had injured the leaves very much; but that need not be a matter to be surprised at; for I see, in many places, even against walls, the leaves are turned brown at the edges, and the young shoots destroyed.

KEW GARDENS.

On the same day, I took the opportunity, as I was so near, of visiting the Royal Gardens at Kew; but as the day by that time was on the wane, my inspection was necessarily a very cursory one. I noticed, however, a few things that I think worthy of being known.

AMHERSTIA NOBILIS.

Most of our readers will have read about Mrs. Lawrence, of Ealing Park, having first flowered this truly magnificent tree about twelvemonths ago. Mrs. L., in consequence of ill health, disposed of her fine collection of plants, and also part of the glass houses. Amongst them was the house containing the far-famed *Amherstia nobilis*. The tree Mrs. Lawrence presented to the gardens at Kew, and there I saw it. It evidently had suffered by the removal, but it is fast recovering, and had on it, when I called, several spikes of its truly beautiful flowers, and besides that, was putting forth new branches and leaves; so that we may hope, in another year, it will have attained its pristine beauty.

STOVE FERNS.

The large stove formerly occupied with Orchids, in which they did not thrive satisfactorily, is now occupied entirely with Ferns. These gardens certainly possess the finest collection in the world of these beautiful and interesting plants; and they are exceedingly well grown and freely propagated. It is no wonder that Sir William Hooker, and his able coadjutor, Mr. I. Smith, are learned in Ferns. With such a collection constantly before them, I may be allowed to say, that nobody else has so good an opportunity of studying their affinities and classifying this large tribe.

ACACIAS.

The month of April is the very time to visit Kew to see the greenhouse Acacias. There is a very large collection of them, and I was anxious to examine them to see if there were any to add to the list I published lately. I saw almost all that I selected, but very few additional species that I could recommend. *A. cultrifolia* is one with broad leaves, and large, bright orange flowers; and *A. diffusa* is another, a prostrate growing species. I met with several large plants of my favourite *A. Drummondii*. The original species, they say,—the variety of much narrower leaves—is not worth growing compared with the species. *A. granilis* was very grand, and several varieties beside it of *A. pulchella* were in full flower. That species seems to sport very much from seed.

In the greenhouses there was a gay display of flowers, such as Epacris and Azaleas. It is evident the governing powers are studying more a good display of flowers to please the million than growing mere botanical subjects. Though the latter would by no means be

neglected, yet, in a garden supported by the public purse, it is but just that it should be so managed as to give pleasure to the general run of visitors.

NEW PLANTS.

In new or rare plants there were not many in bloom. One, named *Besleria ardens*, a beautiful plant, with bright orange-coloured blossoms, sent to Kew by Mr. Linden, of Brussels, promises to be a useful plant, worth everybody's growing.

In a low house, used as a nursing stove, I saw a very strange-looking plant that had made its appearance out of some foreign soil. Mr. Houlston said it was thought to be a species of *Streptocarpus*. It had only one leaf, and no stem. The leaf was six inches long, and nearly as broad. It laid itself flat to the soil, and hung over the pot edge. From the root end of this large, strange-looking leaf the flower-stems spring, bearing numerous slender branches and many flowers on each, about half-an-inch across, and of a pleasing light blue colour. Unless this novel and most curious, and at the same time pretty flowering plant produces seeds, I do not see how it can be increased for distribution.

The *Orchidaceous Plants* are removed into a new, low lean-to house, where they are improving very much. It is, however, no new discovery that low, close houses suit Orchids best.

In the open grounds, I was grieved to see many of the Coniferæ much injured, but more especially on the side facing the north wind. Many of the Cupressinæ and Juniperinæ had their branches killed on that side, whilst the south side was as green and fresh as possible. This shows the necessity of shelter from winds blowing from the north in frosty weather. *Taxodium sempervirens*, on the contrary, was browned, and the young shoots killed on every side. The fine *Auracaria imbricata*, perhaps the oldest in England, has greatly improved in its appearance. I had not seen it for three or four years. It was then an umbrella-looking tree, having lost all its branches; but now the lowest tier, and the next to it, hang down nearly touching the ground, which gives it a pleasing, drooping character, quite different to any tree of the kind I know. I was glad to find the common *Arbutus* had stood the winter's breeze bravely; not a leaf appeared to be injured.

T. APPLEBY.

SELECTING THE SITUATION AND ASPECT FOR A GARDEN.

IN the first place, I may hazard an opinion, which I know is at variance with the one generally received, that a garden lying on a hill side facing the south is not always the earliest and most productive. To make my meaning clear, let us suppose a river running east or west through a valley of level land, say a mile wide, but that the ground on each side of this valley rises gradually until the summit of the hills is attained, which we will suppose to be 400 feet above the bed of the river on both sides, or we might double that elevation, but 400 feet is as much as is generally to be found at right angles to our English streams.

Now, many people would suppose that a garden placed half-way down the slope facing the south, would be much earlier than the same place on the opposite one, and better adapted for gardening in every respect. This notion, I confess, for a long time I held, and imagined the difference would amount to something like a week or so, when the two places were near each other, and local circumstances alike in both; but having had repeated chances to see the cultivation of both sides, my opinion of the "warm, sunny side" has been much

altered; and though I will not deny the possibility of the one facing the south being the earliest, it is certainly not so to the extent I imagined, and many other people believe.

It may be true that the sun, whose rays would seem to strike more directly upon the surface more nearly at right angles with his meridian and strength, would heat such a place more than when such rays pass over in a half vertical direction, but in like manner the surface loses heat proportionately faster at night by evaporation. So that in reality the difference is not so perceptible as many people expect it to be.

One thing, I dare say, we shall all acknowledge, namely, that the level flat land at the bottom is earlier than either. This, I think, is a settled question, and I am willing to give a little advantage to what people call the favoured side, by admitting it may be so much earlier as to account for some fifty feet of elevation, the inclination being the same in both; or, in other words, I will admit that a garden on the north side of the river, elevated 100 feet above it, may be as early as one on the other side fifty feet up; shelter and other conditions being the same in both cases.

I may here observe, that I have not confined my observations to mere gardening matters, but taken a wider range, the shooting and ripening of corn, expanding of fruit blossom, spring in grass, and other features, which convey a more correct notion of the real nature of the place than the half-artificial condition in which gardens usually are kept in. For example, of the neutralising effects produced by heat and cold on a garden facing the south, as stated above, let us take it, for instance, after a dry, sunny day in April, when the ground is dry; such days, in fact, of which the present spring offered many; well, then, we all know that large breadths in every kitchen-garden present their naked surfaces to the "monarch of the day," and are heated by him to a more or less extent, according to circumstances during the day; but then night comes, and a cool, chilly atmosphere sets in, accompanied, as in nine cases out of ten, with a north or east wind, or one mid-way between. Now, it must be born in mind, the valley was heated as well as the slope, and it, too, is subjected to the cooling influence of the night; large volumes of the heated air in the valley is cooled down, or drawn upwards, and its place supplied by this from the direction from which the wind blows. Now, as that is very often from the north, the chilly, cold air which loiters all day on the hill tops is driven down at night to replace the heated air in the valley carried upwards, or rather rendered more dense by the withdrawal of heat. This current of cold air passing over the garden in question, is not likely to do so without imparting a certain degree of cold to it likewise. But then, it will be asked, does not the same effect follow on the southern side? Most certainly it would, were it not that the number of nights in which the wind is in the north out-number by odds those in which it is in a contrary direction, and, consequently, the valley is cooled down by air from the northern slope; while the garden on the southern slope is, in all probability, less disturbed by such currents, and more truly in a state of repose. Most certainly, when we have spring frosts, they are more severe on the slope lying southwards than when in the contrary direction. Thus the advantages of what many call a "well lying plot of ground" has often been overstated; not that I mean to condemn gardens so situated; on the contrary, they possess many advantages, but it is not right to magnify these, nor to detract from the other; for, as I have said, the merits of the two are much nearer balanced than is generally known.

Public opinion has much changed the last twenty or thirty years, on the sites most suitable for gardens, as well as in many things connected with their culture,

and some old notions have been revived and discarded again, so that we really hardly know in what way to recognise anything like a fixed opinion on any one point; but I may here be allowed to attach another much-cherished opinion of "the advantages of an eastern aspect." "The morning sun" has something poetic in it which it is almost sedition to disparage. Yet, somehow, this morning sun has its disadvantages, as well as its advantages. The Kentish fruit-growers are not generally in love with it, as they prefer a western aspect to an eastern one for early-blossoming fruits—as Plums and Gooseberries, and as they plant extensively, their opinion is not to be despised, especially as their object is a very rational one; and it is this—spring frosts are very detrimental to such fruits; and a situation that will partly allow the *gradual* thawing of the frozen blossoms, is not likely to be so fatal to their existence as when that process is done hastily, as it would be if the sun shone direct upon them early in the morning; and we all know the sun usually rises early on a frosty morning; and that the evils which it brings with it are more increased on an eastern aspect than on the western one. But some assert that the morning's sun contains within itself something more congenial to vegetation than it does at other parts of the day. This, possibly, may be; certainly it removes the dew sooner, and may warm the earth a little more, but that it is more powerful in the afternoon must be admitted by all, when we consider that about two o'clock in the afternoon is usually the hottest part of the day, and the shrewd husbandman in the far north sets up his shocks of corn, in harvest time, in lines pointing to the one o'clock's sun, rightly judging that there was as much to be gained after that time as before. But there may be an advantage in having some hothouses and other structures facing the south-east rather than the south-west, as they may thereby receive the reviving influences of the sun earlier in the day, and their artificial condition enables that to be kept up by mechanical means; but in a general way, an eastern aspect is not so very desirable in spring; though I have no doubt it has its advantages afterwards; its defects being, as I say, the facility it gives to a bright sun injuring so many things after a frosty night. This is often manifest by the blackened appearances some trees will have afterwards on that side, and hedges are often so; and I have seen the young, tender shoots of box edging look as if they had been scalded all along their eastern side, while the opposite side was unhurt.

I find I have occupied all my allotted space in explaining my reasons for not agreeing with the public at large on the supposed advantages of south and eastern aspects, but let it be fully borne in mind, that I do not undervalue them, though I do not give them so much credit as they receive from others, and those having scites of the opposite direction may rest consoled that their positions are not altogether without their merits, for in the spring the eastern one is especially liable to objection, while the supposed earliness of the southern one is often more of opinion than of reality, the difference between that and the opposite side being (as stated above) much less than is often believed. Nature here, as in many other instances, lends her kind hand to balance apparent differences with good effect.

J. ROBSON.

OPENING OF THE PARIS EXHIBITION.

THE inauguration of the Great Paris Exhibition took place on Tuesday, the 15th instant. The spectacle was sadly marred by the unpropitious state of the weather, as well as by the incompleteness of the arrangements. A wet and drizzly morning—cold enough in May to have been mistaken

for February—was of itself a sufficient damper to enthusiasm; and the process of nearly an hour's waiting *en queue* before admission completed the disenchantment of those who hastened with hopes of pleasure to the scene. Ten o'clock was the time officially announced for the doors being opened; and as only two hours were allowed for filling the building, most persons thought it necessary to be punctual in presenting themselves. The *Moniteur* was particular in requesting gentlemen to attire themselves in tail-coats. Alas! great-coats were a much more suitable appendage; and these, with a melancholy file of umbrellas, might be seen for a long hour shivering before the doors of the Palace. The workmen employed in getting the building into decent condition for the occasion did not, it appears, finally cease their labours until half-past nine. The last process of sweeping only commenced at that hour, and it was therefore on the strike of eleven before admittance could be given to the crowd who waited outside.

The change to shelter and comparative warmth inside was very agreeable; and, considering the scene which the interior presented only a few days back, the arrangements were as complete as could be reasonably expected. The nave alone had been prepared for the occasion; the remainder of the ground floor, with all save the fronts of the galleries, presented merely a confused assemblage of packing-cases and half-arranged stalls. Though short, the nave looked of handsome dimensions, chiefly owing to the wide span of its vault. It was gaily decorated with a triple row of colours—one along the front of the galleries in the form of trophies, with the arms of the different countries, marking the space they each occupied; another above, where hung the grand national flags; and a third of long pennons suspended from the dome itself, and inscribed with the names of all the cities which exhibited. These lines of bright colour, running, as it were, into the brilliant painted glass which fills either end of the nave, produced an effect at once rich and cheerful. The floor of the nave presented a sort of *pays commun*, in which every country was represented by some characteristic production or trophy. Amongst the most striking objects which it contained were the stupendous sheet of plate glass from St. Gobain, upwards of six yards in height, and of a superficies of twenty yards; candelabras of gigantic dimensions, bronze imitations of tropical plants and foliage, lighthouses, naval trophies, a knight and his steed in full panoply, with a vast variety of rich and curious productions. The effect, looking down from the galleries, was graceful and elegant rather than imposing; the comparatively diminutive size recalling too much, perhaps, the arrangement and dimensions of a bazaar. A throne was erected opposite the grand entrance; but, instead of being in the centre of the nave, it was placed with its back against one of the side galleries, and was thus half concealed from the view of a large portion of the assembly. The assemblage of people was by no means what it might have been, or what might have been expected. From the great width of the galleries, only a few rows of persons in front could be accommodated with seats from whence a view into the nave was gained. The nave itself was almost empty at either end, and full only near where the ceremony of the opening was to take place. On a platform covered with rich carpets, and between the spaces set apart for the products of the United States and Belgium, and in the middle of the transept, were placed two fauteuils covered with crimson velvet, adorned with gold fringe and embroidery, and surmounted with the Imperial Crown; and in the interior of the rich canopy glittered the Imperial arms with the sceptre and hand of justice. To the right and left, clusters of flags with the eagle on the top completed the ornaments of the Throne. On the left were folding chairs (*pliants*) for the accommodation of the princes and princesses of the Imperial family. In the front of the Throne, and within the space marked off by balustrades, were rows of benches; those on the right destined for the members of the diplomatic corps, and on the left for the grand officers of the Crown and the Imperial household. Further down on the right were the seats for the Senate, the Legislative Corps, the Council of State, the clergy, the army, and the judges; and on the left for the other constituted bodies of the State. The galleries of the transept had been formed into tribunes; the space immediately above

and to the right of the Throne was occupied by the orchestra. The exhibitors and the persons invited were distributed throughout the whole extent of the building. From 10 till 12 o'clock the space reserved on the ground floor in front of the Throne was gradually filled, and the eye soon became dazzled with the brilliancy of the costumes, French and foreign, covered with embroidery and insignia of orders belonging to every Government in Europe. Among the earlier arrivals were the ambassadors of Austria, Prussia, Spain, and England. The crimson benches to the left were occupied by the Ministers, the President of the Legislative Corps, and their families; and on the other side the members of the Imperial family. At twelve o'clock a detachment of the Cent Gardes, in full uniform, and wearing their glittering cuirasses, entered the building, and took their place in a line to the right of the Throne; they were soon followed by Prince Napoleon, in the uniform of a general of division, accompanying Queen Maria Christina. The Emperor's arrival had been announced for one o'clock precisely, and at a little after half-past twelve a salute was fired from the Invalides, which was supposed to mark the moment of his leaving the Palace of the Tuileries. Contrary to his usual habit of exact punctuality, it was fully twenty minutes past one when he appeared with the Empress. Prince Napoleon proceeded to the entrance of the building to receive their Majesties, who were accompanied by Prince Jerome and the Princess Mathilde, his daughter. On entering the building, the assemblage rose and saluted their Majesties with the cry of "*Vive l'Empereur!*" The Emperor and Empress ascended the steps leading to the Throne, and remained standing while Prince Napoleon read the address. To the right of the Emperor were the Princess Mathilde and her father, Prince Jerome. To the left of the Empress stood the Duchesses of Esling and Montebello, and the Baroness de Pierres, and behind the Throne the Dukes of Bassano, Cambačères, Marshals Vaillant, Magnan, &c. After a short pause, Prince Napoleon advanced to the foot of the platform on which the Emperor and Empress were standing, and read from a paper the address, which was of some length, and which gave an account of the origin of the building, and intention of the founders.

The Emperor replied as follows:—

"My dear Cousin—In placing you at the head of a commission that had so many difficulties to overcome, I wished to give you a particular proof of my confidence. I am happy to find that you have so fully justified it. I beg of you to thank the commission in my name for the enlightened care and indefatigable zeal it has displayed.

"I open with happiness this Temple of Peace, which invites all nations to concord."

Their Majesties afterwards, followed by Prince Napoleon and the Princess Mathilde, placed themselves at the head of the procession, and walked through the building, amidst the warmest demonstrations of respect from the assembled thousands. The edifice is described as being very handsome, but not equal to that in Hyde-park in 1851. The various articles laid out for inspection are said to be many and beautiful; but there is much vacant room yet to be filled up before the Exhibition can be pronounced complete. Indeed, it appears that on Monday morning no less than 20,000 cases of goods remained unopened; which, when duly distributed through the different courts, must of course add considerably to the magnificence of the scene.—*Morning Chronicle*.

ENGLISH SURNAMES DERIVED FROM THOSE OF PLANTS.

"THE vegetable kingdom presents, as a representative peer, Archibald John *Primrose*, Earl of Rosebery; and as commoners, *Lilly*, the English grammarian, and *Roses* in abundance. In every country of Europe the *Rose* has given its name, not merely to pretty women, such as fair *Rosamond*, *Rose Bradwain*, and many a French *Rosine*, and German *Röschen*, but to numerous families. Sir George *Rose* in London, and Professor *Rose* in Berlin, bear a surname now common in England and Germany; and which equally belongs to France and Italy, to the Spanish and Scandi-

navian peninsulas, to Wallachia and Poland, and probably at the present day to Russia. In the case of the *Roses* of Poland, the name must have been taken from the *roses* which they bore in their coat of arms long before they had the name. The *Griffons*, *Oxenstierns*, and other Polish families must also have taken their names from the arms which they severally bore long before hereditary surnames were known in their country. Sometimes this surname, *Rose*, may have originated in a woman's name; and in such cases comes indirectly only from the flower. Our old forest trees have given their names to families of *Ash*, *Oak*, *Elm*, *Beech*, *Birch*, *Alder*, *Elder*, *Aspen*, *Poplar*, *Maple*, *Hazel*. The *Willow* appears in *Willoughby*; the lime-tree in *Lind*, *Lindley*, and *Lindsey*; the sloe in *Slow*, *Slowburn*, and *Slowcombe*; *Hips* and *Haws*, in *Hipsley*, *Hippesley*, *Hawdon* and *Hawley*; the *Thorn* in many compounds; and the *Pine* in one solitary name, although the *Fir* and *Larch* do not appear. It is remarkable, as Dr. Leo has observed, that in the names of places found in the Anglo-Saxon charters, no mention should occur of a single species of *Pinus* or *Abies*. The Germans have both *Fichte* and *von der Tann*, as surnames. Some herbs and grasses which are found in surnames have been already alluded to. *Cuerse*, *crass*, (*nasturtium*) is apparent in *Cressey*, *Cresacre*, *Creslow*, *Cressingham*, *Cresswell*, and *Creswick*. From fruit, and fruit trees, we have the family names of *Apple* and *Pear*, *Cherry*, and *Peach*, *Crab* and *Crabtree*, *Plum* and *Plumtree*; but *Apricot* and *Nectarine*, *Strawberry* and *Raspberry*, still belong to *Pomona* only.

"Cereals have long flourished in *Wheat*, *Wheaton*, and *Whately*; in *Bere*, the old name of Sir John Barleycorn's family; in some derivatives from this old name already mentioned, in speaking of the *Bear*, in *Oates*, and in *Riley* and *Rycroft*. Though our *Beans* cannot be compared with the great *Fabian* house, or with the *Piso*, the *Cicero*, or the *Lentulus* of Rome, yet *Bean* and *Pease*, and *Peascod*, have at least great antiquity in Europe, and have thus been enabled as surnames to found families. The great tribe of the *Potato* having immigrated into the Old World since surnames became hereditary, have been obliged to keep their name to themselves; and, unlike *Pepper*, *Peppercorn*, and other foreigners, have not succeeded in bestowing their name upon a single English family. In this they resemble the *Physician* and the *Surgeon*; who, for centuries now past, have been unable to take their place in the family nomenclature of England, by the side of those elder branches of the descendants of *Æsculapius*, the *Leach*, and the *Pothecary*."—*Edinburgh Review*.

"DON'T KNOW HOW TO SHANK."

THE article headed as above, which appeared in the January number of this periodical, page 263, seems to have given grievous offence to some. Being the writer, I feel myself called upon to justify the tenor as well as the character of the language used in its composition. My remarks were not addressed to any individual, but I attacked the principle of admitting such misleading and incorrect language in the recommendation of horticultural and floricultural productions to the attention of "kindly, good-natured, and friendly gardeners," amateurs as well as professional; and it was the knowledge of the unsuspecting confidence of many true lovers of plants, that made me, "probably, a little over earnest," in deprecating the principle involved in the above sentence, which I used as my motto. If that sentence had only been once used, it might have passed unnoticed, but as "bad examples are more readily followed than good ones," I saw it was repeated, and would, doubtless, have been so again and again, to the disadvantage of the uninitiated, in what would, in the course of time, have become "garden slang."

With little regard to correctness, my corrector has transcribed the word "humbug," which was meant to convey deceit into "humbugs," which applies to persons, and in his third phrase has used a sentence ending with the word club. This, I consider unfair, as it would lead your readers to suppose that I assailed a particular class of individuals. Nothing can be more unjust, or further from my purpose.

A misconception may be the result of misconception, but a wilful or a negligent alteration is quite a different affair. I hope he will recognise these mistakes for his own sake, as, with so little regard to correctness, any writer's character may be made to appear obnoxious and vile. I hope he will also give me credit for sincerity, when I assure him that if he waits until my advent, "club in hand," as he supposes I shall come, he will have to remain in "durance vile" a very long time, as I would rather "run a mile than fight a minute," under any circumstances which would allow the possibility of avoiding such an unfriendly meeting.

"RUSTICUS A. B.," quotes passages of Scripture to prove that the advertiser was justified, when he said that his Vine "Don't know how to shank;" but my critic strangely forgets that the language of Scripture is symbolical and to enforce truth, whilst the advertiser's is merely an untrue assertion to promote his own gain.

Whilst "RUSTICUS A. B." admits, in one paragraph of his ebullition, that the expression which I took for my motto may be rather "an advertising phrase," may not be in very "good taste," nor a very "choice expression," still, the erroneous view he has taken of my subject, leads him to condemn the means I have used, without offering any suggestion as to what better plan might have been adopted in staying the gradual ingress of false and misapplied language in the recommendation of a gardener's wares.

But my critic's greatest annoyance seems to arise from what he calls my "overbearing tone" and I should be fully prepared to agree with him, if my observations had been addressed to any particular individual or class of individuals. But they were not, being addressed to the readers of THE COTTAGE GARDENER generally. Style is a matter of opinion, and not involving principle, therefore, is not worth differing about.

In conclusion, I beg to assure "RUSTICUS A. B.," that he has made much to do about little. I placed myself in juxta position with a false principle when I wrote the first article on this subject, and my pen is again called into use to repudiate the charges "RUSTICUS A. B." would impute to me. If further evidence is necessary to prove to him there is only one right way to maintain that "right standard," I will cheerfully, but not abusively, place him in the way of obtaining the same limited amount of information as I possess, so that he may learn for himself, and having well weighed and measured his subject, judge what amount of atonement was due from you for the insertion of an article which was penned with "good will" towards all men, and a desire to suppress an evil measure.—C. B. S., Jersey.

GUERNSEY LILY CULTURE.

IF the Guernsey Lily roots would flower annually, and gratify your querist "J. S. K.," at page 45, they would cause a severe loss to the inhabitants of the island of Guernsey, many of whom are interested in what is, on account of its importance, called "The Lily Trade." He is quite correct in supposing the task he proposes to himself a difficult one. The only plan by which I have known it to be successful, has been in the encouragement of a full development of the foliage; he states, they are now coming up. The better the foliage the more perfect the growth of the root.

I recollect reading an article, in some periodical, wherein the writer congratulated himself in having succeeded in flowering them. The plan he had adopted was planting them in a shallow box, and keeping them in a moist stove during the winter, where they made a vigorous growth, which he gradually dried off, by withholding moisture, and placing the box containing them in a sunny exposition during the summer months. I have never proved the experiment myself, but think it feasible, with the assistance of a hotbed as well as with a stove.

Supposing the bulbs "J. S. K." has to be perfectly healthy, sufficiently large to produce flowers two years consecutively, and that they are planted in light, loamy soil, containing an admixture of sand, the situation being under the shelter of a southern wall, the plan adopted in Guernsey might be tried, care being taken to protect the foliage during the

winter months. I think protecting that part of the border wherein they are planted with a cold frame during the winter months would be productive of a better result than growing them in pots, as they seem to be injured by removal. The Guernsey people prefer starving them to transplanting them. Should they, however, be grown in pots, they would require the same care and attention as the other Amaryllidæ, attention being requisite during their period of vegetation, i.e., from September to May.

I would not promise "J. S. K." that he would be successful if he adopted either of the plans I have suggested. I have heard it asserted that the same Guernsey Lily root never does flower a second time, and that it is only when the offsets have attained sufficient size that they produce flowers; but I am happy to think we are not obliged to believe all that we hear, as the person making this assertion was in error in this particular case. I have flowered the same root two years consecutively, and others, to my knowledge, have done the same thing. I have also cut roots across the middle, and the cross section has shown that the roots grew from two centres, and I know of no reason why such a root should not produce the flower-spike two years consecutively, even if the theory be correct that the species does not so generally. I have seen them with two blooming spikes proceeding from the same bulb at the same time, and such roots would be as likely to produce them two years consecutively, if left unmoved as both together.

Frankly, unless your correspondent is desirous of doing something unusual, regardless of trouble, it is certainly not worth his while to carry out his scheme, as, to make the best of it, it is a precarious and likely to be a very unsatisfactory one. In the favoured Island of Guernsey, from the numbers planted, there are but comparatively few that bloom, and they are obtainable, most seasons, at the London seed shops under sixpence each.

For any further information I would refer "J. S. K." to the remarks made on this plant in No. 266, page 85 of THE COTTAGE GARDENER.—AMICUS, Jersey.

NEW PLANTS.

PITTOSPORUM FLAVUM (*Yellow-flowered Pittosporum*).



THIS is a very unspecifically named plant, for the great majority of the species in this genus are yellow-flowered. It is a moderate-sized, much-branched, evergreen, green-

house shrub. It is a native of Port Stephen and other parts of Eastern Australia, where it was discovered by Mr. Allan Cunningham. It flowered at Kew in the February of 1854, and is "one of the finest yet known of the genus."—(*Botanical Magazine*, t. 4799.)

ATROCLINIUM ROSEUM (*Rose-coloured Atroclinium*).

A greenhouse annual, with showy, pink flowers, like a small China Aster, and pale green herbage. It is a native of South-west Australia, where it was found by Mr. H. Drummond in 1853. It belongs to a new genus founded by Professor A. Gray, and there are four other species.—(*Ibid.* t. 4801.)

SENECIO PRÆCOX (*Early-flowering Tree Groundsel*).

This has been long known as *Cineraria præcox*. Under the latter name it will be found in THE COTTAGE GARDENERS' DICTIONARY.—(*Ibid.* t. 4803.) It is a greenhouse, yellow-flowered evergreen, and native of Mexico.

HEDERA GLOMERULATA (*Globe-umbel Ivy*).

This singular stove evergreen comes from Gede Mountain in the Island of Java. It blooms annually at Kew in April and May, and is remarkable for its pendent racemes, like gigantic bunches of currant blooms, four or five feet long.—(*Ibid.* t. 4804.)

RHODODENDRON MADDENI (*Major Madden's Rhododendron*).

"Next to *R. Dalhousiae*, this is perhaps the noblest of the Sikkim Rhododendrons which rewarded Dr. Hooker's researches in Northern India. Its flowers are nearly as large as in that species, fragrant, very much in general form and size resembling the white Day Lily (*Lilium candidum*) but the corolla is delicately tinged with rose. Fine as is the original figure of the author above quoted, it is quite equalled by our flowering specimens at Kew, which were in perfection in May and June of 1854, in a cool and shaded greenhouse. The large, delicate flowers contrast well with the ample dark green foliage, which is rusty beneath, and has deep red petioles. It is a rare species in its native mountains, only found in the inner ranges of Sikkim-Himalaya, in thickets by the Lachen and Lachoong rivers, at Choongtam, at an elevation of 6000 feet above the level of the sea. We cannot venture to consider it a hardy plant. The species, Dr. Hooker says, 'is named in compliment to Major Madden, of the Bengal Civil Service,—a good and accomplished botanist, to whose learned memoirs on the plants of the temperate and tropical zones of North-west Himalaya the reader may be referred for an excellent account of the vegetation of those regions. The same gentleman's paper on the *Coniferae* of the north of India may be quoted as a model of its kind.'"—(*Ibid.* t. 4805.)

CEANOTHUS FLORIBUNDUS (*Copious-flowered Ceanothus*).

This most beautiful of the blue-flowered species is a native of California. It was sent thence by Mr. W. Lobb, to Messrs. Veitch, of the Exeter Nursery, and of King's Road, Chelsea. The leaves are numerous, compact, and glossy, and the crowded flowers look like clusters of balls of mazarine blue. It flowers in June, and is quite hardy.—(*Ibid.* t. 4806.)

ANGULOA UNIFLORA (*Single-flowered Anguloa*).

This stove Orchid was flowered by Messrs. Jackson, of the Kingston Nursery, from a lot of Mr. Warcewitz's Columbian Orchids, sold by auction in 1852. It bloomed in June, 1854. Its flowers are large, cream-coloured spotted with pink, and only one on each scape.—(*Ibid.* t. 4807.)

BEE-KEEPING FOR COTTAGERS.

(Concluded from Vol. XII., p. 257.)

KEEPING HONEY.

HAVING disposed of the medical properties and uses of honey, we proceed to detail what we know of preparing it and wax for use or sale.

By way of conveniently doing this, let us suppose that the system mentioned in Section 5 has been followed, and has succeeded to the bee-master's heart's content; he will then have in his store-room four hives well filled with honey, namely, *a*, and *a*'s second swarm, and *b*'s first and second swarms; and also such supers and glasses filled with honey as he has been able to take from the hives *c* and *d*.

As honey keeps better in the comb than in any other way, it will be better not to break up any of the hives until the honey is wanted, if the bee-master has convenient cupboards for storing his full hives. If, however, room be an object, it will be necessary at once to break up some, at least, of his hives. He should begin with the old hive *a*; its combs will be quite black and tough, and totally unfit either to be sent to table, or to be mashed up; if the latter should be attempted, the product will be a mixture of honey and brood-bread. Having, then, your sieves handily arranged over your milkpans (which may be washed and used for this purpose), carefully cut out all the combs with the knives mentioned in Section 2, and lay them in a dish; then take each comb separately, lay it on another flat dish, and with a sharp knife cut it into as many thin slices as there are rows of cells, taking care to cut through the centres of the cells; then carefully shift all these thin slices into the sieves, and as each cell has been divided down the centre, the greater part of the honey contained in the comb will run through in a nearly pure state. The toughness of the combs, which has been caused by the skins left in the cells by the bees that have been bred in them, as mentioned in Section 1, renders this cutting comparatively easy. The honey which has run through the sieves will have in it many small portions of wax, which, in a day or two, will rise to the top and may be skimmed off, or the whole may be squeezed through a piece of thin muslin, and the honey then run into pots, carefully tied over, and kept in a dry place.

The drained combs must be thrown into a tub of water, and in about twenty-four hours (having been turned over two or three times during that period,) they will be nearly, if not quite, deprived of their remaining honey; they can then be put into an empty hive, or pan, and put near your bees, who will quickly dispose of any small portions that may have been left in them. The water must, in the meantime, be taken care of, and used for washing other combs and the sieves, &c., which have been just used, and when sufficiently strong, this water may be brewed into mead, or vinegar, according to the receipts given in the early part of this Section.

As soon as the bees have effectually cleaned out the drained combs, all such parts of them as show any signs of having any wax about them must be collected, and the wax may be made available in the following manner: it is one which has succeeded with us better than any other that we have read of in works on bees. Make a flat box of perforated zinc, nearly as large in its diameter as the largest kitchen pot you have, from two-and-a-half to five or six inches in height, according to the height of your pot. Let this box be weighted at the bottom, and into it put such waxy combs as you have collected; then put it into the pot and boil it until every particle of wax has melted and floated to the top of the water, whence it may be collected when cool, the refuse in the box being still an admirable stuff for lighting fires.

Having thus, as we conceive, pretty satisfactorily disposed of our old hive, let us turn to the swarms: the outer combs in these will be filled with honey and ceiled over; the middle ones will be comparatively empty; we recommend you, therefore, to cut out the outer well-filled combs, and either mash them up and lay them on the sieves, and run the honey into pots as before, or lay them carefully on a large dish, wrap the dish carefully up in paper and stow it away; some people paper fine pieces of comb separately. As these combs are new ones, they will be neither dirty nor tough, as in the case of the old hive. As to the middle combs, we consider that they are more valuable for their own sakes than the little honey which is in them; and we, therefore, recommend that they should be kept until the next swarming season, either as they are (that is, with their little honey in them), or after they have been cleared out by such of the weak hives of the Apiary as may require a little feeding. In the next summer, these hives half-filled with combs may

be used for hiving swarms with great advantage, for as soon as the swarms are in them the queens can begin to lay, and the bees to store up honey, to say nothing of the time and honey which the bees would otherwise consume in making a similar quantity of comb.

All supers and glasses will, of course, be retained, the honey from the former being brought to table in the comb, and the latter being brought to table just as they are; the honeycomb in supers and glasses is generally much finer than the honeycomb from the large hives.

Before we leave the subject of honey, it may be stated, that when, after a good season, the stock-hives contain upwards of 25lbs of honey, they may be fumigated and deprived of the excess by cutting out one or two more of the side-combs of the hives, and afterwards returning the hives to their original positions, taking care to deal very gently with the stupified bees during the operation. We must, also, again mention the necessity of keeping all honey (whether with comb or not,) in a dry place.

WAX.

But little remains to be said on the subject of wax; many are the means recommended in bee-books for its collection and purification; we have tried some of them, but we have been, we suppose, too stupid to succeed well, and as the method above-mentioned answers very well for old comb, and much better for new, it is hardly necessary to pursue the matter further. It is to be remarked, however, that the wax from the old combs will be very full of impurities, and that that from the new combs will be less full of the same; to get rid of these, melt the wax in a very little water, take a small jar, very narrow at the bottom and wide at the top, make this pot quite hot, and pour the melted wax into it; the impurities will all sink to the bottom of the wax, and can be all cut off together, when the mass has become cold and been turned out of the pot. There are so few impurities in the wax from the new combs, that the combs may be melted in water without the use of the perforated box, and be afterwards melted into a small pot as above-mentioned, and what few impurities there are at the bottom of it cut away.

As the colour of wax from new combs is much better than the colour of that from old, it will be well to melt the combs separately. After the impurities have been cut away, the wax may be melted into saucers, to give it the shape of the wax of commerce.

We conclude these papers with a few remarks on the sale of honey, confessing, at the same time, that we know but little, and have been able to gather but little information on the subject.

HONEY FOR MARKET.

Honey comes to market in two forms, viz.—in the comb, and in jars; the former is the more valuable; pure, well-filled comb selling for as much as half-a-crown per pound in many of the London shops. The beauty of a well-filled comb, quite free from grubs and brood-bread, attracts the fancy of those who think less of shillings than we hard-working family-men do of pence, and when the comb has been transferred to the breakfast-table, it reminds its happy possessors of sunshine and flowers, matters more dear to Londoners than any other items that go to make up this busy world of ours. Good English honey drawn from the combs is chiefly sold at the chemists, and its retail price is about eighteen-pence per pound; and it is to be observed, that honey collected in counties where heather is abundant does not realize so good a price as that collected from gardens, field-flowers, and hedge-rows. Then comes the French, Sicilian, and West Indian honeys, the retail price of which is about one shilling per pound.

From this it will appear that the bee-master's first object should be to get as many small, well-filled glasses and supers, and also to select as many good, clean combs as possible, to sell just as they are, before proceeding to drain any portion of his store into pots. His well-to-do neighbours, who are not bee-keepers, would probably purchase the greater part of the glasses, supers, and combs, if only as an encouragement to scientific bee-keeping; but if he should be unable to dispose of all his stock in such a

manner, he must carry the remainder, with his drained honey, to the nearest market-town, where the chemists are generally ready to buy what is offered them, for the wholesale London houses, at a fair price.

It has been suggested, that where there is much honey to be sold in a village, and there is no convenient neighbouring market, all the honey should be entrusted to some trustworthy fellow-villager, and be taken to London, or elsewhere, for sale; it being supposed, that the increased price to be thereby obtained for the honey would more than defray the cost of the carriage; or the whole store might be consigned to some respectable agent for sale on commission; this system once started might be easily kept up.

We have often seen very excellent foreign honey; but there is, happily, a prejudice in favour of English honey, which keeps up the price of the latter.

It may be expected, that before we bring these papers to a close we should say something on the profits to be derived from bee-keeping: we hardly like to do so, for, in our variable climate, our hopes are so often disappointed, that if we raise unwarranted hopes, and those hopes be not realized, the pleasant and (notwithstanding what we have said) profitable pastime of bee-keeping will be given up in disgust. In making a calculation, however, we shall not adopt the exaggerated and ridiculous figures *assumed* by many writers, but rather err on the other side; let us assume, therefore, that each hive in the Apiary yields fifteen pounds of honey for the bee-master's profit; then, if he has six stocks, at the end of the season he will have ninety pounds of honey of different sorts; and supposing that he gets an average sum of one shilling per pound, he will net £4 10s. for his season's work (besides the health and pleasure to be derived from what he has been doing), and £4 10s. is a large sum to a cottager.

Here we take leave of our pleasant, but oft-interrupted, task, originally commenced for cottagers alone. The kindness of Mr. Editor has induced us to wander a little from our original intention, and to enter into matters hardly consistent with the cottage bee-keeping. It was our wish to have brought together such a large amount of practical information as might have been easily printed on a broad sheet, and have been hung up on the cottage wall, instead of being printed in a book, and carefully stowed away in a drawer never to see the light of day. Perhaps, by a judicious use of the knife, our wish in this matter might be carried out. We, at all events, give every one leave to try.—R.

THE TEMPERATURE AND RAINFALL OF THE PRESENT YEAR.

UPON these subjects, as the writer has remarked in the columns of the *Mark Lane Express*, the backwardness of the present spring naturally enough induces us to regard with more than ordinary interest the observations of the meteorologist. These have led to some useful remarks upon the rainfall of the season, and upon the temperature essential to the germination of the seeds, which, although chiefly confined to those of the garden, may perhaps hereafter be applied to such as are still more valuable and essential to the sustenance of mankind.

The temperature of the month of April was more unusually low than is even commonly believed. The temperature of the nights, it is true, was most frequently three or four degrees above the freezing point of water; but then occasionally it was several degrees below 32 deg. Thus on the nights of the 1st and 2nd it was at 20 deg.; on the 5th, 21 deg.; on the 7th, 29 deg.; on the 18th, 21 deg.; on the 21st, 24 deg.; on the 23rd, 24 deg.; on the 25th and 28th, 27 deg. Need we, then, feel surprised that, exposed to such a low temperature, and with a dry wind almost constantly blowing from the east or north-east, producing a rapid evaporation, the wheat plant, especially on high-lying and exposed situations, is looking thin and miserable? From our own observations, confirmed by those made at Chiswick Gardens, this unusually low temperature has not been confined to the atmosphere, but has, during the months of February, March, and the first twelve days of April, extended to the soil. In February, at a depth of a foot from the

surface, it was 35.25 deg., the average of the previous ten years being 39.74 deg.; in March, 38.75 deg., the average being 40.96 deg.

"One practical lesson," observes a contemporary, "to be drawn from these important facts is, that seeds which might have been safely sown in February, 1846, ought not this year to be committed to the ground till April, and that nothing except the hardiest kinds can this year be safely sown before the end of the month; for until the earth at one foot below the surface reaches the temperature of 46 deg., a great part of the flower-seeds which are regarded as hardy, cannot be ensured from rotting, especially in the presence of wet weather. Physiologists know that seeds have their own specific temperature in which they indicate vitality. The seed of the nettle will not germinate at a temperature sufficient for groundsel, nor the Cape marigold in the temperature that suits the nettle, nor the cocoa-nut in that which is sufficient for the Cape marigold.

We are aware, also, that the seeds of some plants raised in a cold climate vegetate with more readiness than those from plants of the same kind ripened in a higher mean temperature: the same remark applies to certain shrubs and trees. Now it has never perhaps occurred to the farmer to try the effect of sowing in our rather warmer climate the seeds of field crops raised in Northern Europe—such as those of the swede and the common turnip—seeds which it is so desirable should germinate, and speedily get into their rough leaf. It is true that by the use of superphosphate of lime this result is much more easily accomplished than formerly; but we are not without a strong suspicion, from the result of our own observations, that something useful might be derived from comparative trials with seeds raised on colder soils and at greater elevations than the land on which it is generally sown.

But it is not from a low temperature and strong drying wind that our field crops are suffering; rain has been steadily deficient: so that while the demand for moisture has been great, the supply has been reduced. The depth of rain which fell in the neighbourhood of London in the four first months of the last five years was as follows:—

	1851.	1852.	1853.	1854.	1855.
January	3.07	2.72	2.14	1.92	0.56
February	0.90	1.06	0.59	0.78	0.73
March	3.57	0.25	1.48	0.42	1.13
April	1.65	0.52	2.58	0.30	0.10
Total inches	9.19	4.55	6.79	3.42	2.52

We see, then, that in the present year there has fallen only about 2½ inches of rain; a quantity less by about an inch than in the corresponding period of the dry season of 1854, rather less than the amount of the month of April, 1853, and an inch less than the depth which fell in the month of March, 1851.

We have been used to annually note the period when certain crops are first available, and the result in most cases accords with what might reasonably be expected from the varying warmth and moisture of the spring; one or two crops, however, grown in the open air, offer rather a curious exception to the general rule, and in no case is this more remarkable than in that of our Asparagus beds; and these, it will be noted, are more adapted for such a comparative record than other vegetable products, since they are a permanent crop, occupying year after year the same position. The beds to which we allude are placed in rather a sheltered situation, protected from the north and east winds by a high bank; but possessing no unusual advantages of soil, which is a sandy loam. From these beds the first available cutting was, in the year 1850, on the 17th April; 1851, on the 25th April; 1852, on the 22nd April; 1853, on the 5th May; 1854, on the 17th April; 1855, on the 22nd of April. It will be seen from this, that the difference is only about six days in five years; and that only in 1853 (the latest year) was there a difference of eighteen days between that and the earliest cuttings of six years.

We may here mention that we have treated these beds during the last two years with dressings of common salt, guano, and liquid-manure, which has materially added to the vigour of the plants and to the copious produce of the

beds. These are four in number, each being sixty feet long by about three feet in breadth, and furnished with two rows of plants, about a foot apart. As soon as the Asparagus cutting-time is over, a small trench about two inches deep is made between the rows of plants, from one end of the bed to the other: along this little channel two or three pounds of the best Peruvian guano, and an equal weight of common salt, are sprinkled, and upon this about twelve or fifteen pailfuls of the sewage from the house is poured; and when this is soaked into the bed, the whole is made smooth with the rake. The very same operation is repeated when the ripened Asparagus stalks are cleared away in the autumn, before the beds are top-dressed with stable-dung for the winter; and again in March, when the dung is pointed in, and the beds laid up for the summer. We have occasionally, instead of the house sewage, employed a weak liquid-manure, prepared by merely diffusing a portion of horse-dung through water.—J.

ABOVE WORK, BUT NOT BEYOND WANT.

By SAM SLICK.

THOSE who never work—those who number among their most precious privileges a complete exemption from not only the spur of necessity, but the pressure of duty, must find it hard to believe that there are people in the world whose destiny it seems to be, to work all the time. Yet, no; these are the very beings who think God has so ordered the lot of a portion of his children, in contrast to the all-embracing beneficence of his providence in other respects. These might be called the butterflies of the earth, if the butterfly was not an established emblem of *soul*. Their self-complacency is much soothed by the conviction that they are of "the porcelain clay of human kind," and they are thankful, or rather glad, that there is a coarser race, to whom hard work and hard fare are well suited.

The fate of these two divisions of mankind is, after all, much more justly balanced than either portion is apt to imagine. There is a universal necessity for labour, and those who obstinately close their understandings against this fact, whether rich or poor, inevitably join the class of sufferers sooner or later. There is nothing in which what we call *fate* is more impartial. The poor are admonished by destitution, and the rich by ill health; the mere idler by ennui, and the scheming sharper by disappointment and disgrace. Yet this same universal necessity is not more evident than is the undying effort to elude it. After centuries of warning, the struggle still continues; its energy sustained sometimes by pride, sometimes by a downright love of ease, so blind that it looks no farther than the present moment. Thus much of the outer and obvious world, a theatre whose actors, from being, or supposing themselves to be, "the observed of all observers," have fallen into many unnatural views and artificial habits of life, all tending to one darling end of drawing a broad line between themselves and the "common" and the "vulgar."

In these western wilds of America, where nature, scarce redeemed from primeval barbarism, seems to demand, with an especial earnestness, the best aid of her denizens, and where she pays with gold every drop that falls on her bosom from the brow of labour, there may be danger sometimes, methinks, danger of falling into an error of an opposite character. There is so much work to be done, and so few people to do it, that the idea of labour is apt to absorb the entire area of the mind, to the exclusion of some other ideas not only useful but pleasant withal, and humanizing, and softening, and calculated to cherish the higher attributes of our nature. So far is this carried, that idleness is emphatically *the vice* for which public opinion reserves its severest frown, and in whose behalf no voice ventures an apologetic word. If a man drink, he may reform; even if he should steal, we permit him to rebuild his character upon repentance; but if he be lazy, we have neither hope nor charity.

Still, even among us, there are those to whose imagination the *dolce far niente* is irresistible; and it must be confessed that they form a class which is not likely to raise the reputation of the followers of pleasure. They have one thing in common with the fashionables of the earth, a

determination to eschew every conceivable form of labour; but, however dignified this trait may appear when set off by an imposing *hauteur* and an elegant costume, it makes but a sorry figure in the woods, where the prevailing tone is far different. Yet these kindred souls are as incorrigible as their betters; and like them will often perform as much labour, and exert as much ingenuity in avoiding work, as would, if differently directed, suffice to place them in an independent and honourable position.

It must be owned that this land of hard work presents a thousand temptations to idleness. Not to mention the sacrifice with which we begin, the giving up of all that gave life a rosy or a golden tint in the older world, there may be other excuses for a longing after amusement, in minds of a certain class. There is an aspect of severe effort grinding care in the general, of closeness, of constitution of society; the natural consequence of the fact that poverty, or at least narrow circumstances at home, was the impetus that drove nine-tenths of the population westward; and this aspect being in striking opposition to the free, glowing, and abundant one which characterizes unworn nature in this scarcer trodden region, suggests and connects with labour a certain idea of slavery, of confinement; and creates a proportionate desire for all the liberty that so narrow a fate will permit. He who possesses abundant leisure for amusement, will perhaps be heard to complain that it is hard to find; but he who is every hour spurred on by necessity to the most toilsome employments, cannot but snatch with delight every available form of recreation; and will be apt to devote to the coveted indulgence, hours which must be dearly purchased by the sufferings of the future. Let us judge him with a charity which we may hardly be disposed to exercise towards his prototype in high places.

So unpopular, as we have said, so contrary to the prevailing spirit, is this desire for amusement, those among us who are so unfortunate as to be born with something of a poetical temperament, which delights in quiet musings, long rambles in the woods, and other forms of idleness, generally disguise to themselves and try to disguise to others the true nature of this propensity, by contriving many new and ingenious ways of earning money, though all agree in one point, a determined avoidance of everything that is usually called *work*.

In the early spring time, while a thin covering of very fragile ice still incrusts the marshes, there may be seen around their borders a tangled fringe of seemingly bare bushes. On nearer approach, these bushes are found stripped indeed as to their upper branches, but garnished at the water's edge with berries of the brightest coral, each shrined separately in a little ring of crystal. These are the most delicate and highly prized cranberries; mellowed, not wilted, by the severest frosts, and now peeping through their icy veil, and glowing in the first warm rays of approaching spring.

These are an irresistible temptation to our fashionable of the woods. Armed in boots, not seven-leagued, but thick as the seven-fold shield of Ajax, he plunges into the crackling pool; and there, as long as a berry is to be found, he stands or wades; snatching, perhaps, a shilling's worth of cranberries, and a six month's rheumatism. No matter, this is not *work*.

You may see him next, if you are an early riser, setting off, at peep of dawn, on a fishing expedition. He winds through the dreary woods, yawning portentously, and stretching as if he were emulous of the height of the hickory trees. Dexterously swaying his long rod, he follows the little stream until it is lost in the bosom of the woodland lake; if unsuccessful from the bank, he seeks the frail skiff, which is the common property of laborious idlers like himself, and, pushing off shore, sits dreaming under the sun's sweltering beams, until he has secured a supply for the day. Home again, an irregular meal at any time of day, and he goes to bed with ague; but he murmurs not, for fishing is not *work*.

Here is a strawberry field, well may it claim the name! It is a wide fallow which has been ploughed late in the last autumn, and is now lying in ridges to court the fertilizing sunbeams. It is already clothed, though scantily, with a luxuriant growth of fresh verdure, and among and through and over all glows the rich crimson of the field strawberry,

the ruby-crowned queen of all wild fruits. Here,—and who can blame him?—will our exquisite, with wife and children, if he be the fortunate proprietor of so many fingers, spend the long June day; eating as many berries as possible, and amassing in leafy baskets the rich remainder, to be sold to the happy holders of splendid shillings, or to dry in the burning sun for next winter's "tea-saase." Ploughing would be more profitable, certainly, but not half so pleasant, for ploughing is *work*.

Then come the whortleberries; not the little, stunted, seedy things that grow on dry uplands and sandy commons; but the produce of towering bushes in the plashy meadow; generous, pulpy berries, covered with a fine bloom; the "blaeberry" of Scotland; a delicious fruit, though of humble reputation, and, it must be confessed, somewhat enhanced in value by the scarcity of the more refined productions of the garden. We scorn thee not, oh! bloom-covered neighbour; but gladly buy whole bushels of thy prolific family from the lounging Indian, or the still lazier white man. We must not condemn the gatherers of whortleberries, but it is a melancholy truth that they do not get rich.

Wild plums follow closely in the wake of whortleberries, and these are usually picked when they are so sour and bitter as to be totally uncatable; because the rush for them is so great, among the class alluded to, that each thinks nobody else will wait for them to ripen; and whoever succeeds in stripping all the trees in his neighbourhood, even though he can neither use or sell a particle of his treasure, deems himself the fortunate man. This seems ridiculous, truly; but is it not exactly the spirit of the miser? What matters whether the thing be gold or green plums, if they are really useless? This blind haste to secure anything bearing the form of fruit, is only an extreme exemplification of the desire to snatch a precarious substance from the lap of Nature, instead of paying the price which she ever demands for a due and full enjoyment of all her bounties.

Baiting for wild bees beguiles the busy shunner of work into many a wearisome tramp, many a night-watch, and many a lost day. This is a most fascinating chase, and sometimes excites the very spirit of gambling. The stake seems so small in comparison with the possible prize, and gamblers and honey-seekers think all possible things probable—that some, who are scarcely ever tempted from regular business by any other disguise of idleness, cannot withstand a bee-hunt. A man whose arms and axe are all-sufficient to insure a comfortable livelihood for himself and family, is chopping, perhaps, in a thick wood, where the voices of the locust, the cricket, the grasshopper, and the wild bee, with their kindred, are the only sounds that reach his ear from sunrise to sunset. He feels lonely and listless; and, as noon draws on, he ceases from his hot toil, and, seating himself on the tree which has just fallen beneath his axe, he takes out his lunch of bread-and-butter, and, musing as he eats, thinks how hard his life is, and how much better it must be to have bread-and-butter without working for it. His eye wanders through the thick forest, and follows, with a feeling of envy, the winged inhabitants of the trees and flowers, till at length he notes among the singing throng some half dozen of bees.

The lunch is soon despatched; a honey tree must be near; and the chopper spends the remainder of the daylight in endeavouring to discover it. But the cunning insects scent the human robber, and will not approach their home until night-fall. So our weary wight plods homeward, laying plans for their destruction,

The next morning's sun, as he peers above the horizon, finds the bee-hunter burning honey-comb and old honey near the scene of yesterday's inking. Stealthily does he watch his line of bait, and cautiously does he wait until the first glutton that finds himself sated with the luscious feast sets off in a "bee-line"—"like arrow darting from the bow," blind betrayer of his home, like the human inebriate. This is enough. The spoiler asks no more; and the first moonlight night sees the rich hoard transferred to his cottage; where it sometimes serves, almost unaided, as food for the whole family, until the last drop is consumed. One hundred and fifty pounds of honey are sometimes found in a single tree, and it must be owned the temptation is great; but the luxury is generally dearly purchased, if the whole cost and consequences be counted. To be content with

what supplies the wants of the body for the present moment, is, after all, the characteristic rather of the brute than of the man; and a family accustomed to this view of life will grow more and more idle and thriftless, until poverty and filth and even beggary lose all their terrors. It is almost proverbial among farmers that bee-hunters are always behindhand.

Wild grapes must be left until after the hard frosts have mellowed their pulp; and the gathering of them is not a work of much cost of time or labour, since the whole vine is taken down at once, and rifled in a few moments; its bounteous clusters being reserved for the ignoble death of a protracted withering, as they hang on strings from the smoky rafters of the log-house.

Hazel nuts are not very abundant, and they must therefore, so think our wiseacres, be pulled before they are fit for anything, lest somebody else should have the benefit of them. So we seldom see a full ripe hazel nut. I have had desperate thoughts of transplanting a hazel bush or two; but I am assured it would only be buying Punchinello. Its powers are gone when it leaves its proper place.

Hickory nuts afford a most encouraging resource. They are so plentiful in some seasons that one might almost live on them; and then the gathering of them is such famous pastime? An occasional risk of life and limb, to be sure, but no *work*!

Hunting the deer, in forests which seem to have been planted to shelter him, and in which he is seldom far to seek, is a sort of middle term, a something *between* play and work, which is not severely censured even by our utilitarians. Venison is not "meat," to be sure, in our parlance; for we reserve that term for pork, *par excellence*; but venison has some solid value, and may be salted and smoked, which seems to place it among the articles of household thrift. But our better farmers, though they may see deer tracks in every direction round the scene of their daily rail-splitting, seldom hunt, unless in some degree debilitated by sickness, or from some other cause incapacitated for their usual daily course of downright, regular industry. "It is cheaper to buy venison of the Indians," say they; and now that the Indians are all gone, there are white Indians enough, white skins with Indian tastes and habits under them, to make hunting a business of questionable respectability. Ere long it will be left in the hands of such, with an occasional exception in favour of city gentlemen who wander into the wilds with the hope of rebracing enervated frames by some form of exercise which is not *work*.

QUERIES AND ANSWERS.

GARDENING.

BEETLE ON ROSES.—INDUCING ROOKS TO BUILD.

"I observe a fly, or small beetle, more like the common flea than any other insect I know, on small and delicate Rose plants newly sprouted, and on last year's insertion, also on Rose-cuttings in borders and pots. They feed on the leaf and injure the plant excessively, threatening destruction to it. If they, or the leaves on which they are, be touched, they commonly hop off like fleas, but only three or four inches, but sometimes drop and feign death. Can you say what they are, and where bred, and what would effectually drive them off? They are blacker than fleas, and have not such high arched backs?

"I see you are asked how rooks may be induced to settle in particular trees, &c. I have known this plan successfully tried:—a branch was cut in a rookery with a nest and young birds in it, and carried in the daytime and fixed in the desired place. The old birds followed, and fed the young ones in their new tree.—H. H."

[Have any of our readers seen the beetles or weevils in question? We should like to have specimens of them.]

MOWING MACHINES.

"Will you oblige me by giving your opinion on Lawn Mowing Machines? What size do you prefer? Can one

man actually use a 16-inch one? Are they apt to go wrong? and could an ordinary unskilled labourer use them?

"I keep one gardener always, but have more work than he can do. I assist him with ordinary labourers, and having about an acre of lawn, it would be a relief if I could cut it by these labourers, instead of employing his more valuable time. I suppose a horse would mark the lawn with his feet. Whose machines do you consider best?—A. P."

[It is very wrong to say that a mowing machine has ever been made that can be worked by one man. There is not a man on earth who will work a mowing machine to earn his salt, over and above the work of a third-rate scytheman. It is hard work to pull the easiest mowing machine, and it requires one man to guide it. Budding's Engine is the best for small lawns, and a handy labourer ought to guide it better than the best gardener in London; but it requires some practice, and first to be shown how to "bite" by some neighbour; also how to lower and rise the cutters, and how to oil the engine—there is no more art in pulling it than there is in dragging a harrow. Besides the superiority of the "cut" by the engine, the work may be done in hot, dry days, or in the afternoon, when no scythe could work. Where there is a stock of plants and a nice flower garden to occupy a moderate gardener's time, it is very extravagant to waste his time in mowing with a machine or scythe. Where "help is allowed" it should be for the mowing and other heavy labour; for mowing with the best machine is hard work, except when the lawn and the grass are as even and fine as a Turkey carpet.]

POTS FOR BEDDED PLANTS.—MOLES.

"Will you please tell me what sized pots are required for bedding plants, as *Tom Thumb* Geranium, Verbenas, Petunias, &c., if bedded out in the pots?

"Can you tell me any way of getting rid of the moles? They have come into my garden, and are tearing the seed-beds to bits.—TERBLA."

[The proper size for pots to plunge garden plants in depends on the size of the plants. 32s., or 6-inch pots, will be large enough for the Verbenas, and also for small *Tom Thumbs*, such as were made from cuttings last autumn; but for larger Geraniums, and for more safety, we would use No. 24 pots, or the next size above the 32s. But we would never use pots for Verbena beds at all, no good can be gained that way; as, if you look up the old plants at the end of the season, they would not be half so good as "runners" of the young shoots, laid in small pots at the end of August.

There is no way of getting rid of moles so easily as to trap them in their runs. There are traps on purpose for them, which most country labourers can use. They call them "wurit traps" in Herefordshire. If you see a man there setting one of these traps on the other side of the hedge, and ask him what he is about, he will answer, "Please sir, I am setting a wurit trap to catch a mole."]

BLUE MOULD ON PLANTS.—GROWING PELARGONIUMS FOR EXHIBITION.—TAKING UP CROCUSES.

"Will you please to inform me, by means of THE COTTAGE GARDENER, whether I can restore to a healthy state plants kept in a cool greenhouse which have the blue mould off the vine upon them, and how it can be done? Also, how I can raise *Pelargoniums* similar to those exhibited at horticultural shows, which are generally a mass of shoots and flowers.

"Will it improve *Orocuses* by taking them up when they have died down for the season? or will they be better left in the beds?—J. V."

[To get rid of this *Blue Mould*, and to restore the plants affected, it will be necessary to cut off every shoot or part which is infected, even if that should cause them to be headed down to the surface of the balls. No kind of doctoring will ever get rid of this blue mould so easily or so effectually as that.

To grow *Pelargoniums* like those at the exhibitions is like conducting a war; one man will do it much better than

another, from the same amount of learning. You can write very well, but can you tell us how to write a letter, "similar to those" written by Queen Victoria "which are generally" very beautiful, and so forth. 100 gardeners study the business, under favourable circumstances, for half a lifetime, and yet one of them will win a prize for growing *Pelargoniums* over the other ninety-nine. But more than that; there are 15,000 good gardeners in these kingdoms trying to grow *Pelargoniums* as you wish to grow them, but there are only five or six of them who can come up to the mark—how, then, is an amateur likely to excel 10 or 12,000 good gardeners by merely being told? If you turn to "*Pelargonium*," and to "*Geranium*," in any of our indexes, you will see all that we can tell about the matter. A good little book on "*Pelargoniums*," by Mr. Dobson, is just published.

As to the *Crocuses*, much depends on the ground and the drying. If they have been a long time undisturbed, they will improve by being taken up, but not by drying out of the ground. The best way to treat them is to pick out the largest roots for planting again, as soon as good, fresh soil is put into the place, or the old soil is trenched. Never think of keeping *Crocuses* out of the ground longer than you can help. One of the most difficult things to learn is the proper drying of bulbs.]

GLOXINIA CULTURE.—PLANTING OUT *DIELYTRA SPECTABILIS*.

"I have some *Gloxinias*, they are fibrous-rooted, the plants having from three to seven shoots, and are in 6-inch-pots. I know nothing of their culture, but am anxious to do the proper thing. The *COTTAGE GARDENERS' DICTIONARY* tells me the *tubers* should be put into pots according to the size, but these not being tuberous rooted, I wish to know if the pots they are in are likely to be large enough to carry them through the blooming period. The Dictionary also tells me I can propagate them from leaves with or without a bud. When is the right time to take the leaves, and how deep should they be put in the sand?

"Can I cause the beautiful *Dielytra spectabilis* to produce seed?

"With regard to this last plant (as a subscriber to your valuable paper) my best thanks are due to Mr. Beaton for the instructions given in No. 329 for increasing the stock of it. On the 30th of January I took up from the open ground the root of one plant, which I divided into nine; they were potted and put at once in the greenhouse, where five or six of them have flowered beautifully, some of them began flowering five weeks ago; the whole of them commenced growing immediately they were potted, and the rest are now coming into flower. I shall want to put them in the border. When may I do so? I am possessed of that first-rate work, the *COTTAGE GARDENERS' DICTIONARY*.—G. H. T."

[Your *Gloxinias* are quite new, or extremely rare. We never saw or heard of a "fibrous-rooted" *Gloxinia* before. They will do in the six-inch pots all this season without repotting, but they must have moist heat, not under sixty degrees in the day-time, nor under fifty at night. Also, must be well-watered, that is, never be allowed to get dry. If they should not flower this year, they must have this treatment, and by the end of the season you will find large tubers to them after all. They will come from cuttings of the leaves as well as anything. About Midsummer is the best time to make them, and if an inch of the footstalk is firmly put in the sand it will soon root, but, of course, the leaf is left on the footstalk.

Plant out the *Dielytras* as soon as you read this, without disturbing the balls, and let the balls be one inch deeper than the surface of the pot. The more books you read on gardening the more you will be struck with how little you know, and, consequently, the number of your questions.]

GRAPES TURNING YELLOW.

"Having to take the charge of a Vinery, I am quite disheartened at the prospect. The house is nine yards long by four yards-and-a-half wide, heated by a smoke flue. There are about fifty beautiful bunches of Grapes at front of the house, above where the fire enters the flue, and twenty at the

top of the house; the remainder, instead of coming into bloom, have turned quite yellow, and fallen off. They were started to force the 1st of January, and the thermometer was never allowed to exceed 60° until after the Vine came into leaf, until, by degrees, it reached 75°, and is now kept as near to that as possible. The Vine itself looks remarkably healthy—fine strong shoots, and not an insect in the house. If through the medium of your valuable journal you can give me any information respecting it you will greatly oblige.

"I have another Vinery about the same size, the Vines just coming into leaf. Would you be so kind as to give me a hint respecting its management at the same time?—A SUBSCRIBER."

[We should have liked to have seen the Vines, and even then might not have been able to solve the mystery. The weather has been cold since January. Are the roots of the Vines protected? If not, that may prove one cause of partial failure. Just over the flue, and at the top of the house, are the places where the greatest amount of stimulus would be applied, and there the Vines would suffer last from deficient root action. A slight, sudden check will frequently cause the bunches to curl, shank off, become tendrils, &c., when the wood suffers but little. You do not say what Vines you have. If *Muscat*, they require more heat. We presume you mean 75° for night heat. Now, unless when *Muscats* were in bloom—for then, afterwards and previously, and for most others—we are content with 60° at night, allowing the house to get to 70°, 75°, and 78° during the day. By such a high temperature at night you exhaust prematurely the excitability of the plant. Try the 60° at night temperature with the later house, and you will save labour, economise the fuel heap, and get good Grapes into the bargain.]

THE WOODS OF AUSTRALIA.

THE Commissioners of the Paris Exhibition have issued a kind of skeleton catalogue, which, although in general answering the purpose of a mere index, contains some information relative to the woods—perhaps the principal feature in the Exhibition—which we deem worthy of republication. The following is the classification of the trees, and a general account of the country from whence they are obtained, as given in the Catalogue:—

A short description of the general features of the kinds of woodland, from which have been collected the majority of the specimens of Woods hereinafter described in detail, with a few observations upon the general character of the latter, would seem to be a desirable introduction to the Catalogue. They will be useful, in rendering the subject more intelligible to all who have not had the opportunity of informing themselves by personal observation. For greater convenience, the different descriptions of natural woodlands will be included under three classes; and the letter denoting its class will be inserted opposite to each specimen of wood.

Class A.—Forest more or less open; generally composed of trees with little or no underwood; their trunks more or less naked and lofty, height being a more conspicuous feature than diameter; their heads small in proportion to the trunks, divided into few secondary or tertiary ramifications, and thinly clothed with persistent, dry, dull-coloured, thick, leathery leaves, abounding in essential oils, and in their decomposition adding little to the vegetable matter in the soil. The different species of *Eucalyptus* and *Angophora*, with *Melaleuca*, *Callistemon*, *Syncarpia*, and *Lophos-temon*, compose the larger trees which furnish all the common durable hardwood timber used in Sydney and the adjoining districts. Occasionally these dry forests pass into tracts crowded with trees, generally of a single species (still with little or no underwood), their trunks being drawn up to a great height, and of small diameter. The trees of this class are usually produced to a greater size, and with better quality of timber, on lands rather poor than good; the more fertile lands commonly producing trees of comparatively small dimensions thinly scattered over their surface. The rich alluvial lands on the margins of rivers are exceptions to this rule. They are almost always heavily timbered, and towards the coast their character passes from A to C. There are some characteristics applicable to the whole of the large

trees of this class. When at full maturity they are rarely sound at heart, and even when they are so, the immediate heart-wood is of no value on account of its extreme brittleness. In sawing up logs into scantlings, or boards, the heart is always rejected. The direction in which the larger species split most freely is never from the bark to the heart (technically speaking, the "bursting away"), but in concentric circles round the latter. Some few of the smaller species of forest trees are exceptions to this rule; such as the different species of *Casuarina*, *Banksia*, and other species belonging to the natural order *Proteaceæ*. The latter, however, with little exception, belong to class B. They split most freely the "bursting way;" as do the oaks, &c., of Europe and America. A very serious defect prevails amongst a portion of the trees of this class, to such extent, as to demand especial notice here. It is termed "gum vein," and consists simply in the extravasation, in greater or less quantity, of the gum resin of the tree in particular spots, amongst the fibres of woody tissue, and probably where some injury has been sustained; or, which is a much greater evil, in concentric circles between successive layers of the wood. The former is often merely a blemish affecting the appearance rather than the utility of the timber; but the latter, when occurring frequently in the same section of the trunk, renders it comparatively worthless, excepting for fuel. In the latter case, as the wood dries, the layers with gum veins interposing separate from each other; and it is consequently impracticable to take from trees so affected, a sound piece of timber, excepting of very small dimensions. The whole of the species of *Angophora*, or *Appletree*, and many of the *Eucalypti*, or *Gums*, are subject to be thus affected; and it is the more to be regretted, because it appears to be the only reason why many of the trees, so blemished, should not be classed amongst the most useful of the hard woods of the colony.

Another characteristic among these hard woods is deserving of notice. Although the majority of them make excellent fuel, and are valuable on account of the comparative quantity of steam they are capable of generating, the greater part are slow to kindle, and a few of them will hardly burn at all. To this circumstance, probably, is to be attributed the small number of houses burnt, in a climate, and among a population, likely to afford an unusual proportion of such accidents. Few of the species of *Eucalypti* are rich in potash; but several of the genus *Angophora* contain it abundantly.

It would be difficult to form even an approximate estimate of the number of species of Class A, producing good timber, throughout the settled districts of New South Wales. It is believed that very few of them have a wide range; the same local names being applied many times over to different species, in different districts.

Class B.—Barren scrub, covered either wholly with low shrubby vegetation without trees, or with short-stemmed, stunted trees, rarely or never producing serviceable timber. The same dry character of vegetation prevails over this description of country as over the last. The "bush-fires" which sweep over these barren scrubs once, at least, in every four or five years, effectually prevent the species which do not grow with naked trunks from attaining the dimensions they might otherwise be susceptible of acquiring. At each burning the majority are killed to the ground, to be reproduced from the collar. Good specimens of their wood for illustration, are, therefore, scarcely attainable. It may be observed, that the majority of the beautiful flowering shrubs of the colony have their habitats in this sort of country; which is always more or less rocky, stony, or sandy.

Class C.—Rich brush, or "cedar brush." Tracts of country rarely of great continuous breadth, but often alternating at short intervals with Class A, and prevalent only at moderate distances from the sea, or, at all events, to the eastward of the great dividing range. This description of wood-land often occupies country covered with rocks and stones, but of such geological character that a rich soil results from their decomposition. It usually follows the courses of streams; and, in a country favourable, geologically speaking, to the formation of good land, the cedar brushes fill up the valley and the gorges of ravines with their dense vegetation. They are to be found in the greatest

perfection at Illawarra, a few miles from the open sea-coast, upon natural terraces, skirting the mountain side, at various elevations up to 1,500 feet; and upon rich alluvial plains, particularly in the districts to the northward of Sydney, where they are described to be of great continuous extent. They produce few shrubs, but a variety of trees of considerable altitude; frequently of comparatively slender growth, almost universally clothed with beautiful, dense, bright green foliage, their umbrageous character being much increased by the numerous lofty ligneous climbers ("bush ropes"), which attain their topmost branches, and frequently throw themselves from tree to tree. At Illawarra, and in some other districts, four species of arborescent ferns, and two noble species of palms, add materially to the tropical aspect of this description of country. A few of the trees of Class A are to be observed thinly scattered through the cedar brushes. In such case they often attain the most magnificent dimensions; but their general character remains unaltered. During the heats of summer, the atmosphere of the cedar brushes is always much less dry, and the temperature more equable, than it is upon adjoining lands not clothed with rich vegetation. Bush fires rarely or never extend into their recesses; which are difficult to penetrate, even on foot, owing to the numerous irregularities of surface which prevail, and to the tangled nature of the vegetation. These difficulties apart, nothing can be imagined more charming to the beholder; especially where glades or natural openings occur, to enable him to comprehend the full grandeur of the still life around him. The extreme loftiness of the noble trees, which are thrown together in surprising variety, with stems, rarely cylindrical, but of the most picturesquely irregular forms, covered with mosses and orchids, and loaded aloft with huge masses of epiphytical ferns of exquisite beauty; all these vegetable wonders, viewed in the transparent, green, and almost sunless light, which even on the brightest days pervades their recesses, combined with the delicious fragrance, and the agreeable temperature, which in fine weather invariably characterises the cedar brushes, astonish and gratify the lovers of sylvan scenery. But, although the senses are charmed, the difficulties in exploring them, to ascertain of what species of trees they consist, are very great; and still more serious are the obstacles to be surmounted, in getting out new trees when found.

(To be continued.)

TO CORRESPONDENTS.

DAIRY MAID.—*An Old Subscriber* "wishes to know what would be the best and simplest work on the dairy for a young and inexperienced dairy maid to read who is anxious to undertake the charge of a dairy of six cows, and where such a book can be procured?"—The very book you seek for is a small volume, called *The Dairy Maid*, published by Mr. C. Knight in 1847.

TEMPERATURE (J. B. H.).—A thermometer for showing the atmospheric heat should be hung facing the north, two feet from the wall, and five feet from the ground. The average daily temperature is found by adding the highest and lowest temperature together, and dividing their aggregate by two.

DIOSCOREA JAPONICA (A Subscriber).—What we have said about *D. battata* will apply to this.

POULTRY (E. Fairbrother).—We have not received the queries you refer to.

KID BOOTS.—*A Lady* wishes to know the best composition for cleaning these.

COW-KEEPING (L. W.).—Buy our 100th number. It will give you the plain information you seek for.

GUANO-WATER (Sylvia).—Mix half-an-ounce of guano with each gallon of water. We never knew *Clematis* raised from seed; but it might be done. A light soil, with plenty of leaf-mould mixed with it, is well-suited for *Primroses* and *Polyanthuses*.

COTTAGE GARDENING (J. P.).—There is a very useful little pamphlet on the subject, entitled "*Cottage Gardening*," by James Main, F.L.S. It is reprinted from the second volume of the "*Journal of the Royal Agricultural Society*."—Any one having a *White Pea Hen* for sale may write to the Rev. J. H. Payne, Colney Parsonage.

NAMES OF PLANTS (Lindum).—Yours is *Abutilon striatum*. (*Mitcheldever*). We cannot decipher your name; but the plant found by your little boy, "under a common Laurel," is the Greater Toothwort (*Lathræa squamaria*). It is a parasite, attached to the roots of old trees in shady places.

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WEEKLY CALENDAR.

MAY 29—JUNE 4, 1855.			WEATHER NEAR LONDON IN 1853.					Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day of Year.
D M	D W		Barometer.	Thermo.	Wind.	Rain in Inches.	Sun Rises.					
29	TU	WHIT TUESDAY. K. CHAS. II.	29.628—29.567	58—41	S.	40	53 a 3	VIII	2 41	13	2 58	149
30	W	EMBER WEEK. [R. 1660.	29.839—29.765	65—36	S.W.	34	52	2	2 58	14	2 51	150
31	TH	Telephorus melanurus.	30.128—29.948	71—40	S.W.	—	52	3	rises.	☺	2 43	151
1	F	Buprestis viridis.	29.916—29.830	67—50	N.E.	04	51	4	9 56	16	2 34	152
2	S	Trachys minuta.	29.735—29.679	57—47	N.E.	05	50	5	11 1	17	2 25	153
3	SUN	TRINITY SUNDAY.	29.916—29.775	60—44	N.E.	02	49	6	11 47	18	2 16	154
4	M	Aphanisticus emarginatus.	30.125—30.036	62—36	N.E.	—	49	7	morn.	19	2 6	155

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 69.4°, and 46°, respectively. The greatest heat, 91°, occurred on the 28th, in 1847; and the lowest cold, 34°, on the 29th, in 1843. During the period 124 days were fine, and on 72 rain fell.

In the year 1839, when ascending Table Mountain, at the Cape of Good Hope, winning our way through and over the blocks of sandstone, and along the margin of the stream which serves as a guide and a path to the mountain's summit, which is that stream's birthplace, we arrested the footstep of a companion just as it was about to crush a *Pelargonium*, the yellowish-red and purple-spotted flowers of which were peeping above a mass of *Mesembryanthemums*, amid which the little shrub was growing.

The leaves of that little shrub are finely divided like those of the common Carrot. Those leaves are sweet-scented whenever pressed, and those purple-spotted flowers emit their fragrance so soon as the sun has ceased from shining upon them. The plant we thus found and saved in its birth-place was a specimen of the *Pelargonium triste*, or Night-smelling Crane's Bill; the very first of the genus, we believe, that was introduced into Europe, and which, like *Pelargonium zonale*, is a parent of some of the best varieties which now appear on our exhibition tables. More than two hundred years have elapsed since it became first known to our plant-growers, and it is thus described by one writing at the time :—

"There is of late brought into this kingdom and to our knowledge by the industry of Mr. John Tradescant, another more rare and no less beautiful than any of the former, and he had it by the name of *Geranium Indicum nocte odoratum*. This hath not as yet been written of by any that I know, therefore I will give you the description thereof, but cannot as yet give you the figure, because I omitted the taking thereof the last year, and it is not as yet come to its perfection. The leaves are larger, being almost a foot long, composed of sundry little leaves of an unequal bigness, set upon a thick and stiff middle rib, and these leaves are much divided and cut in, so that the whole leaf somewhat resembles that of *Tanacetum inodorum*, and they are thick, green, and somewhat hairy; the stalk is thick, and some cubit high. At the top of each branch, upon foot-stalks some foot long, grow some eleven or twelve flowers, and each of these flowers consisteth of five round pointed leaves, of a yellowish colour, with a large black-purple spot in the middle of each leaf, as if it were painted, which gives the flower a great deal of beauty, and it also hath a good smell. I did see it in flower about the end of July, 1632, being the first time it flowered with the owner thereof."

There is little similarity between that plant and the *Pelargoniums* to which it has aided to give birth, and a comparison of these with their parent is a triumphant evidence of the skill of those earnest cultivators, among whom, in chronological succession, are Fairchild, Sweet, Hoyle, Foster, Turner, Beck, and Dobson.

The cultivator last-named has just published a work upon the management of this flower,* and we recommend it to all amateur growers, for it is full of sound practical information.

As a specimen of its contents we give the following extract, showing for the current year the varieties which Mr. Dobson recommends :—

"TWELVE VARIETIES FOR EXHIBITION.

"In making a list of those I would recommend, I would state that I have not made this list as any criterion for the trade, but for the amateur. A moderate sized plant of each of the following, shown at any exhibition, could not be otherwise than successful. They are confidently recommended, being all distinct varieties, and nearly everything that can be wished. I have not selected any of the several fine varieties let out in the autumn of 1854, as I have thought it best to try them another season before making any remarks on them.

"ATTRACTION (*Foster's*). A very striking and showy variety, orange crimson, its only fault is not opening enough naturally; free bloomer, and strong habit, good throughout the season.

"AMBASSADOR (*Beck's*). Large lilac, of good shape, stout petals, and the best in its class; free bloomer, good habit, good throughout the season.

"ARETHUSA (*Beck's*). Delicate salmon, most profuse bloomer, good shape and habit, early flower, but continues good throughout the season.

"BRIDE OF ABYDOS, the best white out (except Gem of the West) in the style of Old Queen of the Fairies as regards colour; good shape, free bloomer, and dwarf, compact habit, good in June and July.

"CARLOS (*Hoyle's*). Good mottled rose, large truss, and free bloomer; good in May and June.

"EMPRESS (*Beck's*). A first-rate flower of the finest quality; colour vermillion, and very distinct, good shape, free bloomer, although perhaps not quite so free as some varieties enumerated, good throughout the season.

"GLOWWORM (*Beck's*). Very free bloomer, large truss, in the style of Forget-me-Not, but a great improvement on that variety; good in May and June.

"MAGNET (*Hoyle's*). Nothing need be said in commendation of this variety; its desirableness for all purposes is too well known, although far from what we should term a first-rate variety in many points.

"LEAH (*Beck's*). Very beautiful flower, clear white centre, a fine early flower; very striking, and first rate for exhibition.

"OPTIMUM (*Foster's*). Large crimson, free bloomer, good

* The *Pelargonium*, or Practical Observations on its Culture; together with a Monthly Calendar of Operations. By John Dobson. Second edition. London: Hamilton, Adams, and Co.

habit and constant, best in June and July; rather hard in breaking.

"*ROSAMUND (Beck's)*. Deep rosy purple, with clear white centre; abundant bloomer, and excellent for exhibition. May.

"*VULCAN (Beck's)*. Fine salmon, very early flower, distinct and good.

"For twenty-four varieties, add the following twelve:—

"*EXHIBITOR (Beck's)*. Deep rose, fine substance, not very free bloomer, but one of the largest and best late flowers we have.

"*ENCHANTRESS (Foster's)*. Rosy crimson, of good shape and substance, rather weakly habit, but good bloomer. June and July.

"*GOVERNOR GENERAL (Hoyle's)*. Deep rose, free bloomer, and fine habit, good late flower.

"*HARRIET (Dobson's)*. Pink, small foliage, but the most abundant bloomer we have; good throughout the season.

"*PASHA (Beck's)*. Mulberry, very distinct, good habit and free bloomer; May and June it is very good.

"*LUCY (Foster's)*. Lilac, good bloomer and habit, through the season it continues good.

"*MAGNIFICENT (Foquett's)*. Crimson scarlet, a very useful flower, good habit, free bloomer, good throughout the season.

"*PURPUREA (Beck's)*. Fine purple, good habit, and free bloomer; continues good throughout the season.

"*ROSA (Beck's)*. Rose of good shape and substance, free bloomer and first-rate for all purposes.

"*MAJESTIC (Hoyle's)*. Lilac, good bloomer, and constant, good throughout the season.

"*VIRGINIA (Hoyle's)*. White, with dark blotch, good shape and free bloomer, in the style of Virgin Queen, but not so long in the habit.

"*REBECCA (Beck's)*. Cinnamon, very distinct, free bloomer, good habit, very desirable, good throughout the season.

"The best six varieties, having spots on the lower petals, are, *Chauvierii*, *Nonsuch*, *Picta (Beck's)*, *Sanspareil*, *Triumphe de la Tour*, *Zaria*.

"VARIETIES FOR SEEDING.

"In giving a list for seeding from, I do not mean to dictate to any of our great *Pelargonium* raisers, but simply as a guide to those who may be commencing. I advocate impregnation by hand, and not left to the bees, as many do. I believe that with half the number of seedlings saved in this way, you get more from them, and in every way good. Many of the finest flowers out have been procured in this way. In selecting for seeding from, let them be in a house where they can be kept dry. Much seed is lost at the time of gathering, through being kept too wet. One or two plants of each variety should be selected, and placed one among the other. As I consider eighteen varieties quite enough to save from, I give the names as follows, and feel certain that those who try them will be successful; there being colour, habit, freedom of bloom, shape, and other necessary qualities, I give my reasons for selecting them.

"*Ambassador*, for its size, good substance, and shape. *Attraction*, for its colour and habit. *Harriet*, for its habit and profusion of bloom. *Magnet*, for its colour and habit. *Leader*, for its colour. *Conqueror*, for its fine colour. *Optimum*, for its colour. *Pasha*, for its colour. *Phæton*, for its colour. *Incomparable*, for its colour. *Leah*, for its general good properties. *Purpurea*, for its colour and habit. *Vulcan*, for its colour. *Wonderful*, for its colour, &c. *Topsy*, for its colour. *Rosa*, (*Beck's*), for its good shape and habit. *Silenus*, for its colour and habit."

NOTES OF THE WEEK.

It is not generally known that the earliest *Peas* which are offered for sale in abundance in our markets are grown in Portugal, and are brought thence by steamers to Southampton and elsewhere. This year such early supplies will be very small, for the crops in Portugal have been destroyed, either by the severe weather at the commencement of the year, or by some other untoward event of which we have not the particulars.

Information has been published that the *Vines of France* are already suffering severely from mildew. We have reasons for doubting this statement, and our doubting is strengthened by the fact, that the report of the mildew's appearance is coupled with a recommendation and warning to purchase a stock of brandy, before any increase of price occurs. There are rumours spread to benefit other markets besides that of the Stock Exchange.

We are very much gratified by knowing that Prince Albert has presented, during the present month, a Silver Tea Service to *Dr. Kirkpatrick*, the Principal of the Albert Institution at Glasnevin, near Dublin. This Institution has been established for the instruction of students in the science and art of farming. The Prince was so pleased with his visit to the Institution in the autumn of 1853, that he placed there a young man, Mr. J. Pisto, to be trained for the duties of Land Steward of one of the Royal Farms. Mr. Pisto completed his studies very satisfactorily, and the satisfaction of Prince Albert with Mr. Pisto's proficiency, and with the kind attention shown to him by Dr. Kirkpatrick, has resulted in the present we have noticed.

Although there is not the same mania for *TULIPS* in the present day as existed in Holland towards the close of the 17th century, still there is no want of enthusiasm or admiration for this long-cultivated and beautiful florist flower; but the varieties for which the Dutchmen sold houses, and lands, and goods to possess, however beautiful they may have been, would stand a poor chance in the bed of a modern fancier. We have recently paid a visit to the collection of Mr. Groom, of Clapham Rise, which is now in its greatest perfection, and we must confess we were gratified beyond measure at the fine display which is there exhibited. Mr. Groom evidently devotes a great deal of his attention to the cultivation of this flower, and his labours are not without its fruits, the finest flowers in the bed being all seedlings of his own raising. The principal bed is under an awning 150 feet in length, and contains about 2,000 roots of the finest varieties, among which we observed the following:—

Duchess of Cambridge; a very splendid feathered Byblomen, remarkably clear in the ground, delicately pencilled, and with a fine round petal; a flower of good substance. This was broken only last year by Mr. Groom, and we were informed that the price of a single bulb is £105.

Queen Adelaide; also a very fine Byblomen, and a seedling of Mr. Groom's.

Eurydice.—This is of very fine form, being of the perfect cup-shape, and is a full feathered Byblomen.

Victoria Regina; very fine form, and beautifully marked Byblomen.

Marquis of Bristol.—This appeared to be the gem of the whole bed. It is a feathered Bizaare of remarkably fine shape, and well marked with a very clear ground.

We might enumerate many other varieties which attracted our attention, but our space will not allow us to do justice to them. All that remains for us to do is

to recommend our readers to go and judge for themselves, and we cannot doubt but they will come away as much gratified as we did.

FRUIT-FORCING DURING THIS UNGENIAL SPRING.

BEFORE I begin to look into our forcing-houses, let me for a moment advert to the singular weather we have endured. From what I can learn, the frosts of May have been common to all England, and it is not improbable that the sphere of their operations has been much wider. We counted nine degrees of frost at Oulton Park, on Saturday morning, the 5th of May; but on the 4th, the ice was much thicker, being a quarter-of-an-inch.

This is, certainly, a strange state of temperature for a May report; but it has not been a mere matter of ice alone: we had almost nightly frosts through three parts of April and into May, and, moreover, no lack of snow and hail-storms. Of course, these atmospheric conditions have materially influenced hothouse management; more firing, more covering, has been the result; and, setting aside the matter of fuel for a moment, the covering-up affair has become a serious consideration. Every one knows that in consequence of the disastrous war we are engaged in, Russian mats have become much dearer, and, as a concomitant of high cost, less substantial. A much greater consumption of fuel has of necessity taken place this spring, and the necessity for strong night fires, as a more defensive procedure, has not been particularly favourable to our forcers.

It is not unlikely that we shall hear much talk of the *Red Spider* shortly, as so much fire-heat is known to be favourable to its habits. I would advise a very liberal use of sulphur, especially in Vineries, both on account of the Spider and the dreaded Vine mildew, which is almost sure to make its appearance. I am, however, happy to say that it has not yet shown itself here, although we have had its visitations, less or more, for two successive years. It generally makes its appearance towards the end of the first swelling, and proceeds at a most rapid pace if not arrested. There is no doubt that sulphur is efficient as to its destruction; but the worst of it is it makes such a mess amongst the berries when applied to the bunches, and is sadly destructive of that fine bloom for which good grapes are so much admired. I would advise all Vine managers to paint over all available surfaces instantly, in order to obviate, if possible, the necessity for applying it to the branches themselves. We have before observed that there is no danger in applying sulphur to the surface of flues, pipes, &c., which can never become too hot for the hand to grasp without any unpleasant sensation. Our flues, pipes, &c., are all covered in this way, and have been all the spring; indeed, we have repeated the application over the same surface. In addition, the walls of the houses have been lime-washed, and the dressing made to carry as much sulphur as possible. We, therefore, hope so to escape its ravages as not to be compelled to smother the trees with sulphur; but, nevertheless, if we perceive any decided commencement, we shall instantly dust the trees, as through the omission of this, the first season, we suffered seriously from it.

The *Cucumber disease* has commenced again in this neighbourhood. In the earliest frame here, one hill was struck the instant it began to bear, and the plant became a wreck in a few days. We have tried sulphur, and some other things, for this destructive disease, but hitherto we have failed to arrest its ravages; and from all we can learn, it bids fair to become as general as the Potato disease, unless some means are discovered to

arrest its progress. It attacks the Melon plants also; and a few years since we had a huge plant of the Vegetable Marrow, which extended twenty feet, adjoining some infected Cucumbers. This plant, from the very height of luxuriance, became in one fortnight a mass of corruption. The mode of attack, and all connected with it, bore the most complete identity with the Cucumber disease, and I have little doubt the Tomato disease is the same. If we be right in this conjecture, we see little chance of getting quit of it; but if these minute fungi were peculiar to one plant alone, the discontinuance of its culture for one year might offer a good chance of its extermination; "removing the midden would get rid of the Mushrooms."

I still cling to the hope that sulphur persisted in, perhaps in much stronger doses than we have hitherto been accustomed to, may be found either to cure or to palliate this evil; and I advise inexperienced gardeners to resume the good old plan of putting slates daubed with a sulphur paint over the surface of their Melon and Cucumber beds. This I am at present carrying out; for we must not stand like fatalists with folded arms; this will not suit the lively atmosphere of Britain.

It appears to me that, barring the pernicious influence of the Vine mildew, this is likely to be a productive season as to fruit-forcing. It is equally manifest, as with our out-door fruits, that the previous summer has exercised most beneficial influences on the heads of our fruit-trees, even those in-doors; for it is not a mere question of heat. We, doubtless, had much more than an average amount of solar light in the aggregate during last summer, and I shall be surprised if this does not show its generous influences in the quality as well as size of our fruits.

This must have been a terrific spring to those who have to winter their Pines in dung-pits. Surely these proceedings will shortly become mere matter of history. The expense involved in the waste of manure, the labour, and, not least, the anxiety, to say little of the half-failures in consequence, are enough surely to cause any one either to give up Pine culture, or to adopt a better plan.

I shall hope to hear a good report of our Orchard-houses; for, surely, what with the heat and light of the previous summer, the decided rest of the past winter, and the material retardation fruits have received, those in pots, tubs, &c., must be in an excellent position as to prospects. The recurrence of such terrific weather as we have had again right into May, will go far towards making fresh converts to the Orchard-house system. As for glass walls, we now hear little about them. Our worthy Editor was not far wrong when he termed them "expensive toys." I do hope to hear of a great increase in the plain, simple, and, of course, economical Orchard-houses; tolerably low, compact, and mostly running north and south; or, in other words, giving a morning and an afternoon side.

R. ERRINGTON.

EXHIBITION OF THE HORTICULTURAL SOCIETY AT GORE HOUSE.—16TH MAY.

It was lucky that the Society were able to hold their May Exhibition at Gore House—almost in London—for the day, and the day before the show, were cold and threatening for rain, so that it would be hazardous for ladies to venture down as far as Chiswick. Gore House is only a stone's throw, on the other side of the way, from where the first Crystal Palace stood in Hyde Park. If the Horticultural Society could exchange their garden at Chiswick for that at Gore House, they might compete, successfully, with that at the Regent's Park, and be a comfort to the show people; but their

tenure of Gore House came to an end that week. How the Society came to have their show there at all was a mystery to the "Times" itself, but I can solve it in a few words.

The Royal Commissioners for the Exhibition of 1851 got possession of the garden, and a large piece of ground adjoining, for the good of the nation, for a National Gallery, some day, and for other great things as they may happen; but Mr. Soyer rented the ground at the time of the Exhibition and turned it into a "soup-garden:" to get rid of the idea of the smell of a kitchen was, therefore, a practical difficulty in the way of the Royal Commissioners, just as the distance to Chiswick is a May fix for our Society; then, to kill two birds with one stone, the Commissioners resolved to give the use of this garden to the Horticultural for a May show, and what with the superabundance of Roses and other sweet flowers, and a large concourse of the fashionable world, Gore House is now elevated to the highest mark of royalty, and sweeter than it ever was before, or, probably, will ever be again as a "national" of any kind.

Prince Albert being the first of the Royal Commissioners, Her Majesty made it a point of being the first visitor to the show. I arrived there soon after ten o'clock, but the royal party and suite were then half through with their inspection, without being seen, except by those who were officially engaged in the garden. In the absence of the Duke of Devonshire, the President of the Society, the Earl of Burlington, assisted by Dr. Lindley, conducted Her Majesty over the Exhibition. The Queen seemed much struck by the Roses and the fruit. A single fruit of the *Mangosteen*, the finest fruit of India, was pointed out more particularly to Her Majesty, with which she seemed much gratified, and gave a "broad hint" to Prince Albert about having a *Mangosteen* of their own some day. Her Majesty was well "wrapped up," but kept the party on the move all round, as if to keep them from "catching" the damp, chilly air. Soon after they left the garden, the Duchess of Sutherland arrived, with a large suite, including my little countryman, the Duke of Argyll, and a nice boy, dressed half-highland fashion—a fashion I can never "abide;" but to understand that, you ought to have seen Rob Roy when the Bailie suggested the weaving trade for his two boys. The prevailing fashion among the crowd was to guard against the east wind as much as possible.

STOVE AND GREENHOUSE PLANTS.

The "Derby" part of the show—the best collections of Stove and Greenhouse—was contested by Mr. Dod, gardener to Sir John Calcraft, Bart.; Mr. Green, gardener to Sir E. Antrobus, Bart.; Messrs. Fraser, of the Lea Bridge Nursery; and Mr. Barter, gardener to A. Basset, Esq., Stamford Hill; that is the order in which they came up to the winning post. The first time I saw Mr. Dod, the winner of the best gold medal, was under the tea-table, in a pinafore, when his father and I were about to start to Epsom, to buy the first of the fancy Calceolarias. The first collection was magnificently grown, and consisted of *Boronia pinnata*, four feet by four feet; *Pimelea spectabilis*, four feet by four feet; *Adenandra speciosa*, three feet high and four feet through; *Erica Cavendishii*, six feet high and five feet through; double red *Azalea indica*, *Aphelexis macrantha purpurea*, *Gompholobium barbigerum*, four feet high and five feet through; *Eriostemon myoporoides*, four feet high and three feet through; *Chorozema illicifolia*, six feet high and five feet through; and *Azalea exquisita*, five feet high and six feet through.

Mr. Green had *Azalea purpurea macrantha*, six feet high and four feet through; *Aphelexis macrantha purpurea*; *Eriostemon intermedium*, five feet high and four feet through; *Daviesia umbellata*, *Pimelea spectabilis*,

four feet high and five feet through; double red *Azalea indica*, eight feet high and four feet through; *Pimelea Hendersonii*, well bloomed, three feet high and four feet through; *Azalea Iveryana*, most beautiful, five feet by five feet; *Franciscea calycina*, well bloomed; *Aphelexis macrantha*, *Polygala Dalmatiana*, four feet by four feet; and *Epacris miniata grandiflora*, a fine thing.

The Messrs. Fraser had *Pimelea spectabilis*, four feet high and five feet through; *Azalea Fielderi*, a fine white, four feet high and five feet through; *Erica Cavendishii*, four feet by four feet; *Pimelea Niepperiana*, in flower, a small edition of *spectabilis*, three feet by three feet. *Polygala Dalmatiana*, *Erica Webbiana*, *Gompholobium barbigerum*, *Eriostemon scabrum*, *Aphelexis spectabilis*, *Azalea speciosissima*, a large red one; *Leschenaultia formosa*, four feet through; *Boronia serrulata*, *Erica pinifolia rosea*, *Adenandra speciosa*, and a splendid *Boronia tetandra*, five feet by four feet through.

Mr. Barter had *Gardenia intermedia*, a variety of *florida*, five feet high and three feet through; *Adenandra fragrans*, not forward enough; *Polygala acuminata*, three feet by three feet; blue *Leschenaultia*, getting bare at the bottom, otherwise a fine head; *Pimelea Hendersonii*, *Erica Cavendishii*, a fine *Stephanotis floribunda*, *Ixora crocata*, and a noble *Clerodendron squamatum*. You see, by the three last named plants, that Mr. Barter kept to the letter of the law, and lost the day, while his three formidable rivals dashed on right through the parchment, and left their "stove plants" at home.

ORCHIDS.

The next gold medals were offered for the best collections of Orchids, and here again was a tremendous struggle, but the field was wider. The Messrs. Rollison and Veitch fought it out, hand to hand, for the trade, while private growers were grouped together for an independent start of their own, but the prize was "value for value" in the two classes. On the part of the trade, Mr. Veitch won the first gold medal with the following:—*Phalaenopsis grandiflora*, with six spikes of bloom; *Dendrobium anosmum*, the first time I ever saw it in public—a beautiful thing—long, leafless, half-drooping stems, clothed with purplish blossoms; *Dendrobium Farmeri*, with nine drooping spikes of white flowers, *Aërides virens*, with four spikes of bloom; a large *Dendrobium nobile*, *Cypripedium villosum*, in full bloom; *Cattleya ianthina*, with nine flowers; *Cypripedium barbatum*, with twenty-two open blooms; *Trichopilia coccinea*, with brown for scarlet flowers; *Dendrobium densiflorum*, with twelve drooping spikes of gold, in yellow flowers, as dense together as the name implies; *Calanthe veratrifolia*, with fifteen flower-spikes, one of the oldest of the ground Orchids; *Cattleya Skinneri*, the finest of the group, with large, deep rosy flowers, and twelve spikes full of them; *Oncidium ampliatum major*, the best and surest of all the yellow Oncids, with three long spikes, each of which branching off again to carry more bloom; *Vanda insignis*, and *Vanda suavis*, about eight feet high.

Against these, the Messrs. Rollison pitched the following—*Phalaenopsis grandiflora*, with three long, branched spikes of bloom; *Cypripedium barbatum*, with twelve blooms, *Sobralia macrantha*, with twelve blooms; *Lælia purpurata*, a new one three years back, with two flower-spikes, and nine handsome blooms; *Dendrobium nobile*, *Dendrobium chrysanthum*, with four spikes of the softest yellow flowers, with fringed lips; an immense bush of *Oncidium sphacelatum*, *Vanda teres*, *Vanda insignis*, *Maxillaria tenuifolia*, *Cyrtorchilum stellatum*, not often seen, with thirty-six spikes of straw-coloured blooms; *Cattleya Aclandæ*, with the usual two blooms, and no more; *Trichopilia coccinea*, *Dendrobium Dalhousianum*—they scandalize his Lordship's name in England by a

wrong pronunciation, we say Dalhusy, or Dalhusianum. This one had four spikes of beautiful blossoms on a very large specimen, and *Cypripedium Lowii*, with three open blooms. In all the plants of these two collections, the shining succulent leaves, their great size and softness, the plumpness of the stems, ready to burst the skin, or bark, and the large size and brilliant tints of the flowers, betokened the highest degree of skill in their cultivation.

In the private classes for Orchids, Mr. Williams, gardener to C. B. Warner, Esq., and Mr. Woolly, gardener to H. B. Ker, Esq., stood first and second, as they did all last year; but I see clearly enough, that although they are neighbours, they will have a "split" ere long; for Mr. Woolly has pressed his whole weight on the toes of his "best friend" this time. Each of them had twenty plants, and Mr. Williams's ran as follows:—*Lycaste Skinneri*; *Dendrobium macranthum*, the Rhubarb or Balsam-scented; *Oncidium ampliatum*; *Dendrobium pulchellum*; *Vanda insignis*; *Aërides* sp., with two long, drooping spikes of light blossoms; *Calanthe veratrifolia*; *Aërides virens*; *Chysis bractescens*; *Cattleya intermedia*; *Vanda teres* and *tricolor*; *Aërides Warnerii*, which has the largest, and, to my fancy, the best flowers in the genus; *Dendrobium nobile*; *Saccolabium retusum*; *Cypripedium barbatum-superbum*, the difference from *barbatum* being a more purple front and bottom, and a lighter top to the back part of the flower. It is the best of the two; *Dendrobium densiflorum*; *Cattleya Mossiae*; *Phaius Wallichii*; and *Vanda suavis*.

Mr. Woolly had *Dendrobium Paxtoni*, a bright yellow, with a dark eye, not often seen at shows; *Vanda tricolor*; *Phalenopsis grandiflora*; *Aërides virens* and *maculosum*; *Cattleya intermedia*; *Calanthe veratrifolia*; *Oncidium sphacellatum*; *Epidendrum crassifolium*; *Cypripedium barbatum*; *Dendrobium densiflorum*, *nobile*, and *pulchellum*; *Cattleya Mossiae* and *Skinneri*; *Vanda insignis*; *Cyrtorchylum filipes*, with graceful drooping spikes of yellow Oncid-like flowers, having brown sepals.

After them came Mr. Hume, gardener to R. Hanbury, Esq., with *Phalenopsis amabile*; *Brassia verrucosa*; *Vanda teres*; *Chysis bractescens*; *Oncidium altissimum* and *phymatochilum*; *Saccolabium guttatum*, the best there; *Aërides virens*; *Dendrobium pulchellum*, and some others, mentioned above, and for these the large silver medal was awarded.

For Orchids in small collections, Mr. Gedney, gardener to Mrs. Ellis, Rose Hill, Hoddesdon, won the first gold medal with *Phalenopsis grandiflora*, *Oncidium ampliatum major*, *Ansellia Africana*, *Epidendrum aurantiacum*, and *Saccolabium retusum*.

Mr. Clarke, of Hoddesdon, had the second gold medal for fine healthy plants of the above sorts; and Mr. Green had a silver medal for another similar groupe; and Mr. Carson, gardener of W. F. G. Farmer, Esq., of Cheam, had another silver medal for *Arpophyllum giganteum*, I believe the first time at an open show; but we had it in Regent Street. This had eight upright spikes of blooms, with the last six inches at top as closely set with little rosy-purple flowers as a bottle brush is with hair. *Epidendrum longipetalum*, *Calogyne asperata*, a dirty yellow flower, with a streaked brown lip, and others, all well-grown plants. Mr. Summerfield, gardener to J. P. Venn, Esq., Highbury Park, Islington, had a good collection, such as the above, in which was a very good *Dendrobium Dalhousianum*.

STOVE AND GREENHOUSE PLANTS.

There were six competitors for collections of six stove or greenhouse-plants. The Messrs. Rollison sent *Chorozema Henchmanii*, *Aphelaxis spectabilis grandiflora*, *Eriostemon nerifolia*, *Epacris miniata splendens*, and *Azalea Perryana*.

The Messrs. Fraser sent *Epacris grandiflora*, *Eriostemon nerifolia*, *Boronia pinnata*, *Chorozema varium nanum*, *Pimelea linifolia*, and a white *Vinca*.

Mr. Rhodes, gardener to J. Philpots, Esq., Stamford Hill, sent *Dracoccephalum gracile*, a large *Epacris grandiflora*, *Aphelaxis macrantha grandiflora*, *Azalea Gledstanesi*, *Tetralthea verticillata*, *Boronia serrulata*, all fine, large plants.

Mr. Carson had a large silver-gilt medal for *Chorozema Lawrenceana*, *Azalea Gem*, a light rose, with others, and a *Rhododendron formosum*, which is a true *Azalea*, with white and more waxy flowers than is usual; at all events, *formosum* may be considered as the link which joins the *Rhododendrons* and *Azaleas* together.

CAPE HEATHS.

The Messrs. Rollison had the first gold medal for a collection of ten of them, of which, one called *Sindryana* was the best grown specimen that was ever exhibited; it was full eight feet high, and five feet through, clothed with flowers to the rim of the pot. Mr. McNab, the father of the present curator, at the Botanic Garden, Edinburgh, was the only grower of Heaths who could get them up in the style of this pale pink *Sindryana*; *perspicua nana*, *vasiflora*, *favoides elegans*, *florida*, *ventricosa magnifica*, and *mutabilis*, perhaps the highest coloured in all the Heaths.

The next prize for Heaths was won by Mr. Barter, gardener to A. Basset, Esq., Stamford Hill. The two best plants in this lot were *Vestita rosea* and *elegans*.

The Messrs. Fraser had another prize for *Perspicua nana*, *Favoides elegans*, *Ventricosa tricolor*, *Denticulata moschata*, a very pretty light green one; *Propendens*, *Elegans*, and *Thunbergiana*, a very slender kind.

ROSES.

They were magnificent beyond description. Her Majesty might well be "struck" by them; no queen had ever seen such Roses, even out-of-doors, in this, or in any country. Mr. Lane never ran such a risk of being second best. I really do believe the "private growers" will knock him on the head in a year or two; and Mr. Francis, a brother chip, pushed him very close this time; while Mr. Paul distanced the whole brotherhood by a show of thirty kinds of the newest Roses, proving to himself, to his customers, and to all the world, what they are, and what they are likely to turn out.

To count the number of roses on each plant, as I used to do, would take up more time than enough; and if I did count them, and give the numbers, half the world would not believe me. If the Horticultural Society had never done any other good for gardening than this one of Pot Roses, they might well go to bed with a clear conscience. It is already established, beyond doubt, that to see really fine Roses in England, they must be grown in pots.

Mr. Lane's collection of twelve distinct kinds began with the three highest coloured of the old Roses—*Geant des Batailles*, *Paul Ricaut* and *Chenedole*, then *Coupe d'Hebe*, *Countess Moll*, *Baronne Prevost*, *La Mark*, *Paul Perras*, *Louise Bonaparte*, *La Reine*, *Duchess of Sutherland*, and *Cornet*, a large, open, light Rose. The plants averaged from five feet to seven feet in height, and of proportionate width; there was no Tea Rose among them, and but one Noisette—that is, *La Mark*. A first gold Knightian medal was awarded to this collection.

Mr. Francis' twelve were as well grown as the above, but the flowers did not run quite so large. The consequence of this close competition will be a "tie" next year, else one of them will shoot a-head, outdoing

himself and all the rest of them; but, like the Pelargoniums, Roses will soon, and must be divided into two classes for competition. Tea and Noisette in the "Fancy," and Hybrid Perpetuals and all Summer Roses in the other group.

The following Tea Roses were in Mr. Francis' collection, *Souvenir d'un Ami*, *Devoniensis*, *Adam*, and *Nephtos*; then *Coupe d'Hebe*, *Baronne Prevost*, *Paul Ricaut*, *Auberon*, and the rest as in Mr. Lane's group.

Mr. Francis had the second gold Knightian medal for these.

The private growers are every whit as forward as the nurserymen. A new exhibitor, a next-door neighbour to Mr. Fish, had a collection of twelve Roses there very nearly as good as those from the giants of the trade. His card is Mr. Bushby, gardener to S. Crawley, Esq., Stockwood Park, Luton. He received a first gold Knightian medal for them, and richly deserved it; but he had one very serious fault, which may easily be remedied another time, namely, the fancy-printed names. No one could read them a yard off. I can often see twelve months "a-head;" but if I had not known the Roses, I could not tell the names of any of them beyond the first row; and every one who passed, during the time I stood before them, asked the name of "that splendid new Rose." It was *Auguste Mie*! but the fancy-printing could not be read; but his best Rose was *Leon de Combats*, which is almost as good as *Geant des Batailles*. *Madame Lamoriciere* and *Baron Hallez* were equally fine, and the rest were of the more usual kinds, as above.

The second gold Knightian, for a dozen, was won by A. Rowland, Esq., whose Macassar and other perfumes make the hair stand on end all over the world. Of all the Rose growers, Mr. Rowland has made the greatest stride for the last two years; *Countesse Mole*, *Augustin Mouchelet*, and *Blairii*, No. 2, were among his best.

Mr. Terry, gardener to Lady Giles Pullen, of Youngsbury, Herts, had the next gold medal, a Banksian. *Countesse de Tolosan*, a large, flat, blush Noisette Rose; *Marquis Boulla*, *William Jesse*, the *Malmaison* Rose, and the yellow Tea *Viscountesse de Cazes*, were his most conspicuous ones.

Mr. Sage, gardener to R. Robinson, Esq., Hill House, Acton, had a collection of twelve fine Roses; the best of them were *Paul Ricaut*, *La Reine*, *Eugenie des Gaches*, *La Pactole*, *Baronne Prevost*, *Du Petit Thours*, *Charles Duval*, *Caroline de Sansel*, a fine blush; *Elise Sauvage*, *Amandine*, and *Acidale*.

NEW ROSES.

Mr. Paul, of Cheshunt, sent thirty kinds of new Roses in No. 16 pots, very nice plants, with two, three, to half-a-dozen flowers on each, besides flower buds. The following are what I would choose, and the order of the selection. Of Hybrid Perpetuals, *Prince Leon*, like a dark red *La Reine*; *General Castellane*, crimson; *Barone de Kermont*, rose; *Helen* (Paul's), like an old blush Province Rose; *Comte d'Nanteuil*, like a blush Pœony; *Jules Margottin*, a good red rose; *Leon Plee*, a blush; *Louise Odier*, a large trusser, rose; *Madame Hector Jacquin*, rose, or like *Camellia elegans*; *Madame Duchere*, a light blush-rose; *Prince Albert* (Paul), a Bourbon Rose of the highest colour, and seems a strong grower; and *Duchess of Norfolk*, not so double or so dark as it was exhibited last year by Mr. Wood, of Maresfield.

PELARGONIUMS.

Mr. Turner, of Slough, is now the best grower of them in England. The best in his collection, according to the distinction of colour and showiness, or as ladies

judge them, were *Basilisk*, the best scarlet there; *Governor General*, the second; *Magnet* and *Magnificent*, the next two; and *Petruchio*, one of the best of the new ones, and all in the same strain. After them, *Queen of May*, *Carlos*, *Exactum*, and *Sanspareil*, were the most distinct and beautiful. The *Governor General* and *Sanspareil* are still at a high figure, and *Petruchio* cannot be had under a guinea; but *Rosamond*, the best flowered, and the largest Geranium plant there, exhibited by Mr. Turner as a single specimen, can be had for a shilling.

Mr. Dobson, of Isleworth, had the second best collection, in which there were three or four of the new French streaked ones, or else imitations of them; *Peerless*, a flat, scarlet flower, is very good.

The best gold medal, to private growers, was given to Mr. Windsor, gardener to A. Bligh, Esq., of Hampstead, for a dozen, of which these were the best, *Forget-me-not*, an orange-scarlet; *Virgin Queen*, *Pearl*, *Ajax*, and *Little Nell*.

The second gold medal for them was given to Mr. Todman, gardener to Mrs. Buckmaster, and the cream of them were *Governor*, *Sparkler*, a large half white one, *Rolla*, *Beatrice*, and *Aspasia*.

TALL CACTI.

There was a collection of them from Mr. Green, as usual, and one called *Greenii*, after himself, is the best hybrid Cactus in the country; a seedling from *crenata*, and called *grandiflora*, does not deserve that name, as it is not so good or so large as the mother. Is it not strange that we have not yet broke into a new strain through *crenata*? Mr. Green sent a beautiful single specimen of *Tetradlea ericifolia*, of which ladies are so fond, owing to the soft tint of rosy-lilac, and the profusion of bloom.

FANCY GERANIUMS

Were numerous; but the sorts were not so good as we shall have next month. They were too dark as a whole. Mr. Robertson, gardener to J. Simpson, Esq., of Pimlico, had the brightest-coloured ones; but Mr. Windsor, of Hampstead, took the first prize for them in the Amateur Class; and Mr. Turner, of Slough, the best to the first nurserymen; while Mr. Fraser and Mr. Gains followed with second and third prizes.

Cinerarias were not much different from those shown in Regent Street on the 8th, and the same growers had the prizes as then; and also for the *Pansies*.

Very gay *Auriculas* were shown again by Mr. Turner; and Mr. Wilmer, of Sunbury, exhibited a collection of them.

Calceolarias have been ruined by floristical fancies, and we had only one lot from Mr. Gay, gardener to J. Goldsmid, Esq., Regent's Park. The *Auricula* was an old show flower in 1832, when the *Calceolaria* first appeared, and now they seem on a par at the Horticultural Society.

Mr. Henderson, of the Pine-Apple Place Nursery, sent a collection of plants, mostly new ones, of which a splendid scarlet *Verbena*, called *Mrs. Woodrooff*, will be the most generally useful; and the rarest was a Fern in flower (*Osmunda*), which was introduced from North America this spring, or last autumn, by Mr. Low, of Clapton. Mr. Low, the younger, a chip of the old block, spent the "long vacation" last autumn in North America, and picked up many plants, of which we knew very little, or had little of in the trade.

Mr. Garaway, of Bristol, sent a fine-bloomed plant of the "inverted Tulip," under the name of *Genetyllis tulipifera*; and Mr. Veitch sent another of it with the true name, *Hedera*; but his spelling was *Hederoma*. Now, who is right? Mr. Backhouse sent it to Regent

Street as *Hedaroma*; and the author of the name, Dr. Lindley, spells it *Hedaroma*; in "The Vegetable Kingdom." Surely the Doctor must be right?

Embothrium coccineum, a new half-hardy plant, from Mr. Veitch, looked exactly like a young *Ixora coccinea*, but was not well coloured. I heard, five-and-twenty years since, that this was one of the most brilliant scarlet flowers belonging to South America. Anderson was in raptures with it; but the seeds he sent home failed. I think it ought to have cold frame culture from the moment the flower-buds appear. Like *Hedaroma*, the least forcing may be fatal to the colour.

The rice paper plant, *Aralia papyrifera*, was shown by Mr. Veitch, but not in bloom. It has large, soft, palmate leaves.

Andromeda formosa, from Pine-Apple Place, would be a fine thing if it would bloom out-of-doors. Perhaps it will. I recollect *floribunda* being kept in the greenhouse. *Formosa* has all the parts larger than *floribunda*.

Grevillea sulphurea is not much, but *G. lavendulacea* is better. Both were in Mr. Henderson's collection, also *Gastrolobium* and *calycinum Drummondii*, *Pultenae*, *erici-folia*, with small, brownish-yellow pea flowers, with two species of *Rhopala*, and some older kinds.

The best-grown single specimen at the show was a Heath, from Mr. Veitch, named *Bruniades*, a variety of *Gnaphalioides*, and of which *Erioccephalis* is another variety. The three, if there is so much difference in them, are the most difficult of all the Heaths to get up as first-rate specimens. I saw just such another specimen of *Gnaphalioides*, in May, 1837, with Mr. McNab, at the Edinburgh Botanical Garden, who is my authority for this difficulty; also, *Odontoglossum Karuveskii*, which looks in the way of *Epidendrum leuchochilum*, and three pots of *Swainsonia lessertiaefolia*, which promises to be a good thing. The flowers were purplish.

Mr. Dennis had six of his *Alma*, a forcing Geranium, mentioned already.

Mr. Windsor had a standard *Fuchsia*, trained umbrella-like. This was the only *Fuchsia* at the show.

Mr. Cutbush had a very pretty novelty, called *Hypocalymna robusta*, the very opposite to the specific name, being a graceful, slender plant, four feet high, with long, straggling shoots, loaded with little pink flowers as close as they could stand.

There were many more "specimens," the three best of which was a *Gompholobium barbigerum*, from Mr. Clark; a large, deep rose Azalea, called *Empress Eugenie*, from Messrs. Rollinson; and an *Erica favoides elegans*, four feet high and six feet through, from the same firm.

Mr. Lane had a silver medal for a collection of hybrid Rhododendrons, in which were two good yellow ones; a pale buff one; a fine rose, called *Augustum*; a white, called *Nivalis*; and a very large *Gibsoni*, nearly pure white.

Mr. Gains had another such collection, of which *Delicatissimum* was the most distinct.

Messrs. Standish and Noble, among other things, had the large Rhododendron *Edgeworthi*, mentioned at page 106, where I am made to say twenty heads of flowers, instead of twenty flowers. This splendid Rhododendron had the twenty flowers full open that morning, but not quite so many after the royal visit. Her Majesty never admired a plant so much before; and who would begrudge her one of the shoots?

AZALEAS.

There never was seen at one show such a number of Chinese Azaleas. I was regularly astonished at the sight; one side of the longest tent was filled with them from end to end; they were of all heights under eight or nine feet, and of all diameters under seven feet; some of them, as those from Mr. Clark, had not a single stick in

them, and those from Mr. Lane were very free from stakes. The double red is now the one admired the least. *Exquisita*, and *Variegata*, *Iveryana* and the "union" ones, are the most admired of the light ones; the union is, when two or three kinds are grafted on one plant. The most conspicuous of the red ones are *Decora*, *Coronata*, and a new one to the exhibitions, called *Susanna*; it was in a collection of standards by Mr. Bray; I never saw it before. I think there were twelve collections of them. Messrs. Lane and Fraser took the best nursery prizes, and Mr. Carson, gardener to W. G. F. Farmer, Esq., was at the head of the private growers.

FRUIT.

A single fruit of the Mangosteen (*Garcinia Mangostana*), from Sion House, was the lion of the day; it was gathered with two opposite leaves to the spur on which it grew, and was about the size of a small Orange, and of a dark purple colour. One of our great patrons of gardening came up at the time and gave me the following note, respecting the Mangosteen, "for your COTTAGE GARDENER." There were but three specimens of it ripened, one of which was cut and "passed round" at Sion House; the second was presented, the other day, in Paris, by the Duchess of Northumberland, to the Empress of the French; and the third, then before us, was to be sent to the Queen, at Buckingham Palace, that evening.

There was a collection of *Mandarin Oranges*, little plants in pots, from Mr. Fleming; and two very dwarf *pot-Vines* loaded with White Muscadine Grapes, from Mr. Constance, gardener to C. Mills, Esq., Hillingdon; such another hit as Roses in pots. I never till that day saw a Vine in a pot which I should like the credit of sending to a gentleman's table; but Mr. Constance's pot-Vines would be an ornament on the best dessert table in this country, and, likely enough, will rouse the spirit of Grape-growers and dessert fanciers to such a pitch, that pot-Grapes, or Grapes in pots, will be as much sought after at table as pot-Strawberries; for the latter we are indebted to Mr. Fleming for hitting on the plan of having all the Strawberries on a plant ripe for table at the same time.

The Black Hamburgs and the Strawberries were exceedingly good. Cherries were also superior, and the whole had a richness and lusciousness about them, as you looked down the long benches, as I never saw before at a May Show. Mr. Clements, of East Barnet, had the first medal for Black Grapes; Mr. Slowe, gardener to W. R. Baker, Esq., had the second best medal; Mr. Dods, the same, and, I believe, Mr. Fleming as well; at all events, there was little difference between the three lots. Mr. Bradley, gardener to Sir S. M. Peto, at Summerleyton, had a prize for very good Black Grapes, as also Mr. Munro, gardener to Mrs. Oddie. Mr. Sparry, of Brighton, would seem to have a distinct variety of *Black Hambro*—they are always small in bunch and berry, but as black as sloes at all times. Mr. Bradley had the best White Grapes, but this dull, cold spring was so much against the appearance of White Grapes, that none of them were nearly so good as we had in May, 1854. Lord Boston's gardener, Mr. Robinson, had the heaviest and best Pine—such another *Providence* as he sent to Regent-street on the 8th of May—it weighed 7 lb. 4 oz. There was another showy *Providence*, from Mr. Clements, above 5 lbs. Mr. Fleming, and Mr. McEwen, of Arundel, were also successful with smaller Pines. Mr. Fleming had the best Peaches and Nectarines, also best Cherries—the latter, and the Elruge Nectarines, were particularly well-coloured, as was also a dish of Cherries from her Majesty. Strawberries were numerous. Mr. McEwen took the best prize for them, and for Raspberries. Mr. Cox, gardener to J. Hodges,

Esq., took the next prize for Strawberries, and there were six or seven more prizes given for them. The *British Queen*, from Mr. McEwen, were particularly good. Mr. Busby, gardener to J. Crawley, Esq., took the best prize for Brown Turkey Figs; and Mr. Feming for the best Melon—his own *Trentham Seedling*. Mr. Robertson, gardener to Lady Emily Foley, had the second best prize for Melons. A dish of beautiful Lemons, grown in the open air, by Mr. Lockyer, Prince's-square, Plymouth, had a prize; and also some very long, good-looking Cucumbers, called the *Himalaya*, from Mr. Roser, gardener to J. Bradbury, Esq., of Streatham.

D. BEATON.

GLIMPSES AT GARDENS.

WHITTLEBURY.

THIS interesting residence of the Earl of Southampton is within a few miles of Towcester, and not so far from either the Buckingham or Blisworth Railway Stations as ought to cool down the professional enthusiasm of a young pedestrian gardener. For several years I have been anxious to see the place, and more especially when Mr. Tillyard made many of the gardening world hold up their hands in wonder at the detail, by others, of the splendid masses of the dwarf Dahlia, *Zelinda*, harmoniously blended and contrasted with other beds equally beautiful. These gardens have lately come under the management of our old friend, Mr. Ayres, and though the few minutes I was enabled to spend upon the place would preclude anything like a description, a few glances at some of the salient points might induce many to visit it in the height of its beauty, as I mean to do sometime myself; and more especially, as I understand that the noble Earl has kindly resolved to open the gardens once a week, during the season (Fridays, I believe), and every day during the earlier months of summer. Although, in the forcing-houses, pits, and greenhouses, there seemed to be a vast quantity of bedding material, yet, on seeing the vast size of the beds, and the number of them, I was forced to conclude, with Mr. Ayres, that annuals must be partly employed for groups during the present season, so that a second summer will be wanted to see the beds filled with the very best bedding-plants.

I have incidentally alluded to one of the characteristics of the place;—the very large flower-beds on grass in front of the mansion;—and the other characteristics are chiefly two—the great variety of scene produced on a comparatively small piece of ground; and the extreme simplicity of the means employed, these consisting chiefly, if not next to entirely, of broad hedges, masses and banks of the common and the Portugal Laurels. These, in most places, seem to be regularly cut and pruned, thus presenting at once a strongly-marked outline of the artistic gardenesque, instead of what may be deemed the more natural picturesque.

In traversing the main walks, and noticing side avenues, with walks of velvet turf, between these laurel banks,—the small borders at their base covered with Lilies of the Valley, Winter Aconites, and other spring bulbs—I could not help wishing that the shears and the knife had performed their work less regularly, so has to leave, here and there, some out-jutting spray; but then I reflected that such a departure from rule might interfere with the *unity* of expression it was desirous to maintain throughout, a subject which it is no easy thing to make matter of compromise. There can be no question, that allowing these lines of evergreen a little more of their own way would greatly reduce the necessary labour, but then one of the defined features of the place would be lost; and, seeing the great similarity that is moulding our gardens, I would much prefer that Whittlebury

should stand out as a bold exception to what generally prevails, and from whence ideas might be gleaned for giving seeming amplitude of dimensions upon a comparatively limited space of ground.

It will often be found that such an artistic style will be most satisfactory when—owing to there being nothing attractive in the external scenery, or for the gratification of the feelings of quiet seclusion, or for the indulging of the somewhat morbid “monarch of all I survey” principle—there is little seen beyond the garden demesne. With all the variety and extent of mental powers, few men, or women either, can grasp and enjoy more than one set of ideas at the same time; and though contrasts, if not too violent, are ever pleasant, and variety seems indispensable to our enjoyment, still, when the purely artistic and the naturally picturesque in gardening are introduced in the same place, they should succeed each other rather than be mingled. I do not recollect one view from the grounds or main walks at Whittlebury that broke in upon the one feeling of unity of idea and of expression. The beauty and interest of such a place, therefore, if it is to maintain its unique character, will greatly depend upon the yearly cost and labour of high finished keeping—a fact of no little import to those who otherwise might feel disposed to adopt the artistic style—without a due consideration of the cost of maintaining it in efficiency.

The flower-garden to which I have alluded, with beds so large as to be measured by yards and poles, instead of feet and inches—contrasting so strangely with the general gimcrackery and gimtracery Lilliputs that are getting all the fashion—are placed on grass on the south-east side of the mansion. The mansion itself has a large out-jutting wing on the south-west side, as far as I recollect, terminating with a neat conservatory. A gravel-walk surrounds this lawn garden, and is bounded all round by a bank of Laurels. In front of these Laurels is a broad border of Rhododendrons, and other shrubs, that must be beautiful in this season. This border is also well stocked with Hollyhocks; and I understood these were all of one colour—rose, I believe. Although the beds might be altered in shape and slightly reduced in size—thus widening the turf spaces—the changing any of them for the Lilliput form would, I think, not only destroy the distinctive feature, but lessen and dwindle down the massiveness of their beauty. Such beds are peculiarly fitted for having broad margins of complementary colours to the chief colours of the beds, and these beds again contrasting with each other; and though I have never seen such beds in their beauty, I could easily fancy their splendour in full bloom, in a fine sunny day, with such a mass of green as a background, to throw back and reflect the colours. The storing plants, so as to fill such beds effectively, will give full play to the reflective and scheming faculties. Pity the luckless wight, who can get no farther than the good old lesson, “Put everything in its proper place; and keep every place for its allotted thing.” Let this bedding system go on, and woe betide him who cannot make one place the habitation and the home, for a time, of many a different thing.

Though I, for one, would be sorry, in such a place, to see or hear of such massive beds being cut up into groups of smaller size, a little change might be introduced with advantage, or, at least, might become matter for consideration. Standing on the east side of the conservatory, as far as I recollect, with the width of the lawn, which is here much the same as the width of the main part of the mansion, separating you from it, is a broad, straight gravel-walk, backed by evergreens, and apparently terminating in a grotto at the farther extremity. Now, there is no apparent means of getting along to this wall and grotto excepting rounding the lawn, by one end or the other, or walking straight

across it—all very well when dry, but scarcely suitable for ladies' slippers when wet or loaded with dew. If that walk were continued across the lawn, there would be two terminations—the grotto at the one end, and the conservatory at the other.

I know not what effect such a broad piece of gravel might have on the lawn when seen from the higher windows, and very likely this may have constituted the reason for preventing the lawn being broken up. But if this did not constitute an insuperable objection, a greater variety could be produced in this lawn or mansion garden; as, between the walk and the house, one or more separate groups of small beds could be sunk in a panel, and thus be the means of introducing many little things near the eye, that would not tell, or it would be difficult to obtain enough of them so as to produce an effect in these large beds. If such beds were sunk, the eye would pass over them, without obstruction, to the massive beds beyond. I throw out this idea, not by any means all my own, because I feel sure that many readers will be apt to visit these gardens during the summer, who pilgrimage for the triple purpose of admiring, reflecting, and learning, and who are fast getting into the knack of imitating only those parts of a policy and a system of which their enlightened judgment approves. The great evil is, that in such matters there are no fixed principles of action, and though each and everybody may criticize, it is with the full understanding that in such matters a man must just please himself if he can.

On getting to this beautiful grotto, I was agreeably surprised to find that this fine, broad walk that led to it was merely the half of the top of the letter **T**, or the out-jutting leg of an **L** reversed, as another large, broad, straight walk goes off at right angles. On both sides is a broad verge of turf, furnished respectively with a row of standard Roses. On the one side, the line of Laurels behind is straightish; but on the other, it recedes, so as to leave a large space for another flower-garden, with beds of the usual size, bordered with Box, and gravel between. This must be an agreeable change from the large beds on the lawn. I have heard something, though I cannot tell the tale, of a nobleman so partial to uniformity, that he never constructed anything, however simple, but there must be a *pair*, in all respects similar; and there has been many a smile, as the story goes, that the saucy gardener, when he shut up a young depredator in a building on one side of the walk, must needs engage his own son in the building on the opposite side, and all for *uniformity*. Now, I feel pretty sure that this flower-garden will be so interesting in summer,—all the more from having such a nice green background, especially when the sun plays upon it,—that not one in fifty will ever think of the demand that a strict uniformity would make in having a similar large opening for a garden on the opposite side; or that this garden itself might be screened from the walk, and not seen until it was entered. I noticed here, that the standard Roses had no ring or circle of bare earth round the stems, but were turfed close-up all round; and Mr. Ayres told me, the plants received the requisite amount of water by just moving a little bit of turf, or letting it remain as it was, and fixing firmly down a large flower-pot, filling it with water in the evening, and removing next morning when the liquid had all drained away. A few large pots, thus used, and charged daily, would soon suffice for watering a great many plants, and might be used with advantage in the case of other plants beside Roses.

The termination of this broad walk would be the favourite locality for general visitors.

On the right, many grass paths branch off, shaded with the never-failing Laurel, presenting even from the outside much variety of scene, and furnishing good hints to the suburban gardener, as, without closely

examining, it would almost be impossible to believe that such variety could be produced in such a small space.

Turning to the left, for a little distance, you at once look down upon a splendid piece of water, with a large willow drooping in its centre, with walks all round the water, with the never-failing Laurels as a back ground, the earth removed having been instrumental in making most picturesque banks and undulations in the grounds. At the back of the grotto, and bounded on one side by the banks of the lake, is a large Pinetum, an avenue of Deodars and Araucarias, which, no doubt, will one day be most interesting; but planted on a *level* surface, it at present looks tame, compared with the witcheries and enticements in the neighbourhood of the lake.

Of the kitchen-gardens, which seemed small for such a place, of the greenhouses, forcing-houses, all full, I shall say nothing, as I have already lingered too long; but I must notice a range of new, small houses, with a short-hipped back roof, heated by hot-water below and above, and in which Pines, Vines, Beans, Cucumbers, and Melons, were growing, with Strawberries on shelves at the back and overhead. I notice these merely for chronicling the mode of Melon and Cucumber growing. The beds in all these houses extend from a deep pathway under the hipped roof to the front wall, and the heat, bottom and top, is ample. I long ago stated, that the best Melons are produced by stinting their root-room, and that I have had better and heavier Melons from pot-growth than ever I had them from beds. I was pleased to see the adaptation of the same principle here. The Melons were growing quite vigorously enough, the Vines being trained to within a foot or so of the glass on a wire trellis. The pit might be about four feet wide, and they were planted near the front, and a rough wall of bricks was run up near the middle to curtail the root-room. Not only would the Melons thus be benefited, but a nice little bed was thus left next the pathway, for striking and growing tender exotics.

The Cucumbers were treated much in the same way, and trained to a trellis in a similar manner. There were several fine kinds that were new to me. I obtained some cuttings, but they bid me good-bye. The bug did for them. I have before recommended "Ayres on the Cucumber." His late father was one of the most successful growers I have met with, especially in pots. The numbers he must have cut in his day of the *Sion House* or *Kenyon* must have been enormous.

Mr. Ayres likes the *Sion House* and the *Newington* Beans for forcing; the latter is often sent to table whole. I have often thought that Beans would be much better if cooked whole, after merely ending and stringing them. Cut by method or no method, the real flavour must be greatly dissipated by the water.

My friend who took me to Whittlebury only allowed me an hour. I was a little more than the time; but even now I would have gladly spent half-a-day. I can easily picture the rational enjoyments that many from the neighbouring towns will derive when the gardens are all blooming. The houses in the large village of Whittlebury appeared very comfortable, convenient, clean, and neat; and almost every cottage had its arbour and its flower-garden.

R. FISH.

MEDINILLA MAGNIFICA.

THE MAGNIFICENT MEDINILLA.

MOOR PARK, the seat of Lord Robert Grosvenor, is about five miles from where I am writing. I had an opportunity of visiting the gardens there, on the 18th instant, and saw, in the plant-stove, a fine specimen of this truly magnificent plant in flower. I can say, without

exaggeration, that it was the finest specimen, the best grown, and had the greatest number of blooms of any plant of the kind I ever met with. It was four feet high and as much through, and had no less than seventeen large spikes of its beautiful flowers in high perfection. I was so much gratified with it, that I cannot refrain from writing about it, and doing justice to the skill displayed by Mr. Sparrow in cultivating it to such a high state of perfection. I am quite certain there will not be a finer specimen exhibited anywhere this season.

Description.—The credit of introducing such a noble ornament to our stoves is due to Messrs. Veitch and Son, of Exeter. It was collected for them by Mr. Lobb, in Java, and was introduced to this country in 1848. It is a noble, evergreen, shrubby, stove-plant, with compressed square stems, winged at the angles, and with short bristles at the joints. The leaves are very large, almost a foot long, placed opposite each other. They are of an oblong heart-shape, clasping the stem, stout and leathery, and rather wrinkled. The flowers are produced at the ends of the shoots in drooping panicles more than a foot long. The branches of the spikes are in whorls, with numerous, large, many-nerved bracts of a pleasing rose-colour. As the spikes advance in growth the bracts reflex and drop off early. The buds are very handsome and of a deep, glossy rose-colour. The flowers are very densely placed on the panicles, and the spike has a considerable resemblance to a long bunch of small rose-coloured Grapes. This is but a faint description of this fine plant; to fully understand and appreciate its beauty it must be seen.

Culture.—As the blooms of this plant are pendant, it is evident that the close bush system of growing plants will not suit it, inasmuch, as then many of the spikes will be concealed amongst the stout branches and large leaves. Mr. Sparrow, at Moor Park, fully comprehended this, and therefore has trained the plant under his care standard fashion, pruning away the lower branches, leaving the stem bare between two and three feet, and then allowing the branches to grow and spread themselves on every side. The effect of this judicious management is excellent. Every panicle is seen hanging down gracefully, clear away from the large leaves. Every one possessing a plant of this kind should immediately adopt the same method of training. The only possible objection is the space such a plant so trained would occupy; but it is so noble a plant when in flower, and the leaves are so large, and of such a rich green all the year, that it is really worthy of all the room it requires. Supposing, then, that objection is considered no objection at all, and it is determined to procure a plant and grow it well; let the plant be purchased in the summer months, so that it may travel safely. If possible, get a plant with one stem, and proceed to re-pot it as soon as it has recovered the effects of the journey. As it is a rapid grower, it requires a rich, good soil composed of two parts good, fresh, turfy loam, fibrous peat, well decomposed hotbed dung, and vegetable mould in equal parts, well mixed, but not sifted, with a free addition of sharp river or silver-sand, to be used well aired, and neither wet nor dry. It does not require such an extremely large pot. The specimen alluded to above was in an 11-inch pot. The first shift should be into a pot two sizes larger than the one it is in when obtained. To ensure speedy growth it would be advantageous to plunge the pot in a mild bottom-heat of either tanner's bark, or leaves—the latter to be preferred when choice can be made. As the plant grows, and sends forth side-shoots, these should be pruned off, leaving the leaves to draw up the nutriment from the roots, and perform the other functions of absorbing carbon, &c., to give solidity to the stem. If the plant

makes rapid progress, a second potting might be given towards the end of July.

Watering.—As this plant has such a large surface of leaf it will evaporate a considerable quantity of water; therefore, it should be liberally supplied when growing freely. The syringe, also, should be in frequent use both on the upper and underside of the leaves, to allow free egress and ingress to the health-giving gases. The soil should be frequently stirred on the surface, to admit water and air to the roots. The heat it requires is 70° to 75° in summer, and 60° to 65° in winter. With this management it will flower the second year, but if a fine specimen is desired quickly, it will be advisable to nip off the first blooms, and encourage growth another season, by repotting as before. During winter, as the temperature will be lower, the supply of water will be less needed. In fact, like most other plants, it requires a season of rest or cessation of growth to enable it to produce its lovely blossoms. Sufficient water, however, must be given, to keep the leaves fresh and healthy, and of a good colour.

Propagation—This plant belongs to the natural order Melastomaceæ, all of which are easily propagated by cuttings. The best are the side-shoots, in a half-ripened state, and with the smallest leaves. They should be taken close to a joint, and put into small pots singly in soil with a layer of silver sand on the top—the pots to be well-drained. Insert the cutting close to the side of the pot, and make the sand firm to the cuttings. Water without wetting the leaves. If a tanned is handy, plunge the cutting-pots in it, and place a hand-light over them, making it air-tight; shade closely from the sun for a fortnight, and then give a thinner shade during sunshine. In a month or six weeks the cuttings will be rooted, and should then have a little air daily, increasing it as the plants attain strength; then repot them, and replace them under the hand-light for a few days, till they are able to bear full exposure. Afterwards, treat them as old established plants, by repotting as they require it, and training them up with a single stem, to make them fine specimens, like the one at Moor Park.

T. APPLEBY.

ADVICE TO YOUNG GARDENERS.

(Continued from page 110.)

THE grand aim of every wise man is to provide for that period of life when the bodily powers are weakened, and the mind, after a long life of active exertion, requires repose. A strict attention to personal propriety and sober habits I need not dwell upon. These are so self-evident, that in these reading days the least informed gardener understands the necessity of being steady, sober, and industrious; and to these indispensable qualities he will add that of being careful of his health and money so hardly earned. Supposing a young gardener, of, or about twenty-five years of age, has obtained his first place, he should immediately form a general plan for the future economy, or management, of his health and means. Many persons, not gardeners, have a notion that it must be a healthy business. And, no doubt, before the introduction of so much forcing and culture of exotic fruits and plants, when a gardener had only to attend to his hardy fruit and vegetable garden, the profession was a healthy one; but since the general introduction of hothouses there is a wide difference in this respect; the gardener is now subject to heats and colds, which are liable to bring on rheumatism and inflammation. Working all day in winter in a temperature of, perhaps, 70° or 80° degrees, and then coming out into another, perhaps, 30° lower; or, in summer, being in the ice-house, which is now in requisition in most good

gardens, not only for the ice itself, but as a storehouse for preserving fruits and vegetables, the health, unless due precautions are taken, is sure to be injured. The evil arises from the partial operation of heat and cold. One part of the body is heated or cooled sooner than another—the circulation and perspiration are unequal, and the whole system put out of order. Various distressing diseases are the consequences, such as ague, fever, costiveness, erysipelas, rheumatism, stiff joints, &c. The greater number of pensioners on that excellent institution, The Gardener's Benevolent Society, are, in consequence of such maladies, suffering the penalties, I fear, in many cases, of want of care (in the exercise of their profession) in not guarding the body from such extreme changes.

Whenever a cold is caught, it should be immediately attended to by opening the bowels gently, and restoring by a warm bath the natural circulation of the fluids in the body, so as to open the pores of the skin and allow free perspiration. The wearing of flannel next the skin is a great preventive of catching cold. I have worn it ever since I was twenty years of age, and though I have worked in Pineries and Orchid-houses nearly all my life, I have never had a serious illness all the time. Colds I have had, but by due attention to them as soon as caught, I got rid of them. In addition to flannel, when syringing, steaming, turning bark-pits, and such like extreme heat and moisture operations, I always wore a pair of wooden-soled shoes, vulgarly called clogs. These were used as protections against change from heat to cold, and are no less useful as protectors against the change from cold to heat. In winter there is pruning and nailing to be done. These operations do not allow of sufficient bodily exercise to excite warmth in the limbs, such as digging, hacking, or wheeling would give; hence, the hands and the feet become benumbed, and these parts of the body are much colder than the rest. In such a state, if the gardener has to go into the Pinery, Orchid-house, or any other highly-heated forcing-house, the circulation of the blood is greatly accelerated, and the numbed parts become very painful, because the vessels are contracted with the cold, and cannot allow the volume of blood to pass; hence, they (the parts) become diseased, and stiff joints and rheumatism takes place.

If these circumstances occur often, and are neglected, the whole system, in time, will be disordered:—opening medicines, and, probably, the doctor, will be requisite, and many months of suffering from the acute pains of such fell diseases will have to be endured; and in many cases, some of which I know in this neighbourhood, the limbs are diseased for the remainder of life. I state these matters strongly, and do most earnestly press them upon the serious consideration of my young friends. I would advise them, above all things, to be careful of sudden changes. A man may endure cold or heat with impunity, and have good health. I have a son in Demerara, by no means a strong constitutioned youth, but he endures the excessive heat, and enjoys excellent health; though on a recent visit to England he told me that he frequently had to change his linen three times in a day, and always twice. We well know that the West Indies are as hot a climate as any part of the world, yet men live there to the usual term of human existence. Then, again, in cold countries, such as Siberia and Lapland, the human being exists, and has good health; but if these inhabitants of the coldest and the hottest regions of the earth could be transported from one to the other every day, or even twice a day, what could we expect but shattered constitutions, diseased limbs, and wasted lungs. Yet the gardener in large forcing establishments is, in a measure, in the same predicament as a man

would be who lived one day in Demerara, under a temperature of 80° or 90°, and the next in the cold regions of the north in a temperature twenty or more degrees below the freezing point. Therefore, again, I say to the gardener, take great care of yourself in such changes, and let the change be as gradual as possible; that is, if you wish to pass the evening of your days in tolerable ease and health.

Never rush out into the open air, especially in winter, without wiping yourself previously perfectly dry, and putting on warmer clothing; and never go into the hothouse with numbed fingers, or feet, without severe friction of the benumbed parts, to restore the force and natural circulation before going into the higher temperature of the hothouse. Many persons, when their feet or hands are very cold, hold them to the fire, a most injudicious practice, and almost sure to bring on chapped hands and chilblains, if not worse diseases. A far better plan is to immerse the parts in cold water, or, in extreme cases, to rub the numbed parts with snow, if any is on the ground, then wipe them dry, and rub with flannel, or rough towels, thus the limbs gradually become warmed, and ill effects of the change are prevented. However, in many cases the work in the hothouse may be so arranged as to be performed altogether and finished in the evening. The out-doors work may be done also for an entire day, so that the changes from high to low temperatures will not be so sudden. Indeed, the natural feelings of the gardener will suggest this method to his mind in winter, but in spring and summer the change will not be so perceptible, and is then liable to be disregarded, and less precautions taken. Hence, many take cold even at such seasons more than in winter. I advise this—take equal care of your health all the year round, and let that care be one of the rules of your conduct never to be neglected.

This, then, is one of the golden rules to be deeply impressed upon your memory. Take care of your health. I do not suppose for a moment that a well-informed gardener will injure his health by late hours spent in drinking, or ale-house society; I consider that his mind is so trained as to the fitness of things, as to be entirely above such degrading, miscalled pleasures of low society. The next grand rule is,—Take care of your money. But my allotted space is full, and, therefore, I must defer that important rule to the next opportunity.

T. APPLEBY.

(To be continued.)

THINNING IN TIME.

THERE are few things in which the public taste has undergone more changes than in the article of flowers; the patience with which our ancestors pursued the calling of florists and botanists has but few parallels at the present day. The Tulip, Ranunculus, and Auricula, which, at best, do not increase quickly, were by them sedulously cultivated, and many other things received a care at their hands which we have too hastily abandoned, but which the last few years has, in some measure, restored again. Now, it is not my purpose here to compare the past with the present in the flower-gardening line, but to compare certain rules laid down in the code of laws which legislators have laid down for the observance of the flower-gardener of the present day, as compared with what is expected to be done in the kitchen-garden at the same time.

The bedding-out flower-gardener plants his various favourites as thickly and closely together as his means will allow, while the admirer of show Carnations, Tulips, Dahlias, and of a host of other flowers, plants them out at wide distances apart, and if he contemplates any of

these flowers for exhibition purposes, the plant is surrounded by stakes and screens sufficient to disgust an observer of Nature with the notion of growing such fancy things; in fact, some flowers are said to have been brought out on the stand in almost as much an artificial condition as if they were made of wax. Thus, the same individual will plant his *Tom Thumb* Geraniums at six inches apart, and his *Strawberries* at two feet or more, and yet there is but little or no difference in the size of the two plants when both full grown; but as the design is said to be to have a full display as early as possible in the flower beds, I cannot find much fault with it, but beg none of our younger readers will attempt anything like it in the kitchen-garden; for, however well to a cursory look a well-covered piece of ground may be, it may, at certain times, be obtained at a great sacrifice of the articles there grown; for instance, a bed of Onions may look well enough to the eye of a stranger passing along in a railway train, but a more close inspection will detect all the evils that a want of "thinning in time" leads to, while all other crops are affected in like manner.

It is, therefore, now important, when the growing season may be regarded as at its best, to take especial care that nothing suffers from want of room.

I have been sometimes pained to see a lot of the Cabbage tribe allowed to remain on the seed-bed long after they ought to have been planted out, and, of course, they got as shanky and crooked as possible; and when planting-out time did arrive, how often are these crooked stemmed plants forced into a straight line, and thrust headlong into a deep hole, made by some extraordinary substitute of a dibber, so deep, in fact, that no more than what is necessary of the top is left above the surface. Now, when the soil is as good two feet below the surface as at the top, this may not do so much harm, but I know of very few instances in which it is so. In fact, I might say, I do not know of any case in which it is so; for, apart from the supposition that the subsoil may be inferior to the top, there is a sad denial of the want of air as we proceed downwards, which tells much against vegetation; and though here, again, we are met by a kind accommodation on the part of Nature, who assists, or rather directs the plants to root upwards into soil more becoming its wants, yet in doing so, there is a loss of time, during which the plant looks badly, and very often, to make bad worse, the unsuspecting looker-on deluges it with cold spring water, as if an invalid wanted a cold bath. This evil being of very common occurrence, I would here call attention to it; and though it may be almost impossible at all times to get all such plants planted out before they do get leggy, I would advise the new beginner to take a little more time and patience in the operation, and when he meets with Cabbage plants that have stood over winter in the seed-bed, with stems something like the handle of a winch, his first care is to be sure not to break them in the taking up, and afterwards to plant them with the spade, allowing the horizontal part of the stem to remain the same as before, only an inch or two under ground; this can be easily accomplished, and the root will be no deeper, or very little so, than it was before, while the plant will have had no twisting or unnatural operation to endure, except, of course, the removal, which is something. Now, as there are many gardens in which it would be important to trust to the subsoil alone as producing the crop, I think it would be well for those who plant out Cabbages with the crow-bar to consider the absurdity of so doing—a neat present appearance is the only plea—the plant is placed up to the neck, as, of course, it should be, but its other extremity may be in stiff clay or barren gravel.

Such Cabbages had not been properly thinned, and now let us look at some other crops that have been

similarly neglected—a bed of *Onions*, for instance. Now, we all know the top or blade part of the Onion is only that portion of the bulb which is necessary to support it by the influence it exercises in contact with the air; in fact, a sort of lungs to the plant; but, that like the same important organ in ourselves, it can only act well when in a healthy condition. Now, when the crop has undergone the stifling process of being allowed to run up in contact with each other, all struggling and striving for that agency which is denied to each, their lower parts become, to a certain extent, blanched and tender, and when the rude process of thinning does take place, the delicate portion of the plant, before screened from the atmosphere by surrounding plants, is suddenly exposed to it, perhaps to the bright sunshine, and the plant's supporters being gone, it, as a matter of necessity, falls down, and it needs no argument to prove the injury it must sustain before it recovers its proper position again; not that the operation ought to be delayed on account of the weather, unless there seem some urgent reasons for so doing, but that it would have been better had it been done some time before. "Thinning in time" may, therefore, be regarded as one of the fundamental laws of gardening, which every one ought to obey to the letter who wishes for success in anything he attempts to cultivate.

When a young crop is compelled to struggle for an existence with an encroaching enemy, in the shape of groundsel, chickweed, &c., the evil is the same, or worse, than when subjected to competition with their own kind; for, in most instances, the progress of weeds is faster than that of the legitimate crop, so that we have a much worse case than the other; but the universal war waged between the cultivator of plants and weeds is so well known, that it is needless here referring further to it than to urge on its being vigorously carried out, especially amongst young crops, and, in fact, all others; for though there may be some excuse in allowing a few annual weeds to get a little a-head on ground intended to be dug very soon, yet the practice has few points to recommend it, while its general untidiness is sufficient to condemn it.

Without going into the details of thinning particular crops, I would strongly advise the young and careful cultivator not to run into an error which brings retribution with it, namely,—having a large portion of such crops as *Carrots* and *Onions* to be drawn for use while young. This laudable forethought, as it may be sometimes called, is often carried too far, and the main crop is much injured by so much more than the requisite quantity being left for this purpose, and the consequent injury the main crop receives by struggling on so long in a thick state. With such crops, both present appearance and future abundance are secured by closely attending to the time-honoured maxim of "Thinning in time."

J. ROBSON.

NOTES FROM PARIS.—No. 12.

THE Universal Horticultural Exhibition was opened on the 3rd inst., in the grounds prepared for it in the Champs Elysees, but only Commissioners and Members of the Horticultural Society were admitted on that day. The following day the price of admission was two-francs-and-a-half, but the usual charge is fixed at one franc on the week days, and half-a-franc on *Sundays*. Unfortunately, the weather was for the preceding eight days somewhat cold and cheerless, and though the trees were green, and the flowers of the season in full bloom, we had but little sun, and the wind continued in the north and east. The opening of this Exhibition was, therefore, less brilliant than could have been wished, and, as yet, but few people have paid it a visit, though there is no lack of promenaders every day in the vicinity. A week or two must, however, elapse before the houses and tents

which have been constructed for the plants can wear a satisfactory aspect. The raised clumps in the open ground are filled with Stocks, Pansies, Tulips, &c., and some rich collections of greenhouse Azaleas, and miscellaneous plants, occupy two or three round tents of about twenty feet in diameter. The stove and the aquarium have been partially filled, but the arrangements are not yet sufficiently advanced to make it worth while sending a detailed notice. An effort has been made to shut out the view of the grounds from the exterior, but the Bays and other shrubs, which have been planted for this purpose inside of the slight wooden-rail, appear to have been shaken by lifting and standing so long in the baskets before being replanted. The leaves of last year are now yellow, and are likely soon to drop.

In some of the London daily papers the plant structures have been spoken of as "the great glass houses;" but though they are neat enough, they are, in reality, very small, and only two of them deserve the name of houses.

The greenhouses of France, in general, present a peculiarity which is worth notice; they have all, more or less, a neat and light iron gangway on the top, to which access is obtained by a sort of ladder, also of iron, and the whole is raised about six inches from the glass on iron props. The gangway or balcony is by no means unsightly, but is very convenient, as the workmen are thereby enabled, with perfect facility, to do anything that may be required on the roof.

The general arrangement of the garden is all that could be expected on so small a scale, for it is but little more than half an-acre in extent. The English style of "laying out" has been copied as nearly as possible; that is, there are no rectangular figures, or beds such as prevail in the ornamental gardens of the *Palais des Tulleries*, and at the garden of the Luxembourg. Indeed, the continental style of gardening, as seen in France, Belgium, &c., is essentially stiff and formal in outline; like the rigid description of the institutions which form the national character. This severe style can only be adopted with advantage in the construction of cities and towns; but it is quite out of place in pleasure grounds or ornamental gardens.

With the exception of M. Verschoffelt, of Ghent, who has contributed some coloured illustrations of choice Camellias, the exhibitors are all French, the greater number being nurserymen in the vicinity of Paris. One or two insignificant contributions have come from Bordeaux and Strasbourg. I have seen nothing from England. But, if my information is correct (for at the time of my visit there was no official label attached to the case), the East India Company have sent a large and very valuable collection of wax models of tropical fruits, the natural size, all finished in a style of the highest excellence. These models surpass anything that is to be seen at Kew Gardens, or at the Museum d' Histoire Naturelle here; at least, with respect to tropical fruits, for the models of Fungi and Lichens at the Museum there is far beyond all praise. Indeed, the great and never-failing attraction of this Exhibition is the fruit department, which includes both natural and artificial productions, and it is certainly no ordinary treat, in our latitude, to see, in the first week of May, an exhibition of Cherry-trees, in pots, loaded with beautifully-coloured fruit; also Strawberries, Figs, Grapes, Cucumbers, and young Green Peas. The Cherry-trees are but little more than two feet high, and bear, on an average, from fifty to sixty fruit.

In a former communication I offered some observations on artificial fruit, and proposed that models of all the sorts in cultivation should be exhibited in our public Museums, but I was not aware that at the very moment I was offering this suggestion, preparations for the first example were nearly completed, and there is at present to be seen, at the Horticultural Exhibition, a collection of several hundred varieties of Apples, Pears, Plums, Apricots, Peaches, Gooseberries, Strawberries, &c., all accurately named, and modelled from nature with the utmost nicety of detail. The "bloom" of the Plums, the slight down of the Peaches and Apricots, the clear transparency of some of the Gooseberries—all are represented with a fidelity that might deceive the most practised eye. The directors have, however, made a mistake in placing these and similar productions in a place which is much too small to admit the crowds that will be sure to flock round them.

The manner in which the fruit is at present arranged is not what it might be, and, in a matter of this kind, arrangement is of the first importance; but it is not worse than what we have in England. One or two large, ornamental baskets have been filled with some attempt at taste, but they are exceptions. I should observe, that they are literally covered on the outside as well as the inside, as if the *outside* of a vase or basket was ever intended to be stuck all over with fruit. Such, however, are sometimes the outrages of our decorators. A feature which deserves particular notice, is the formation of a fruit-garden, showing the various ways of training fruit-trees, as standards, and on trellises, including dwarfs and riders. Considering the small extent of ground, the trees have been placed to the most advantage, and, in some cases, the borders of the clumps are formed of young Apple-trees, bent and tied in the form of a light trellis, which is both ornamental and agreeable when in flower and fruit. The plants offer but little requiring mention; they are composed chiefly of Azaleas, Cinerarias, Tulips, Pæonies, and the common sorts of the greenhouse. But I must reserve further details for a future occasion.—P. F. K.

THE APIARIAN'S CALENDAR.—JUNE.

By J. H. Payne, Esq., Author of "The Bee-Keeper's Guide," &c.

SWARMING.—The time for swarms is now very nigh at hand, if we are to have any, but the weak state of the stocks generally makes it not very desirable. However, if they come, the best must be made of them. By all means let the new swarm be placed where it is to remain as soon as it is settled in its new hive, which rarely exceeds ten minutes. This will save the bees much loss of time, as well as numbers of them their lives.

SECOND SWARMS.—On no account suffer a second swarm to remain by itself, either join it to the first swarm, or return it to the parent hive; or, where more than one second swarm is expected, let two of them be put together.

LOSSES.—Numbers of stocks have died in April, and some even in May. An amateur told me rather boastingly, at the breaking up of the winter frost, that he had eleven stocks in fine health, but now he tells me quite a different tale, for eight of the eleven are dead.

NEW QUEEN.—On the 29th of April, I observed at the mouth of one of my stocks (a swarm of last year) an unusual number of bees, and upon examining them I discovered a queen in the centre, a very large one, and, from her colour and the tattered state of her wings, a very old one. This may be accounted for from the swarm coming from a stock that had not swarmed before for many years. I took her from them, and kept her for two hours, and then returned her; her return caused the greatest uproar, which lasted for half-an-hour, when she was brought out quite dead. Order was then immediately restored.

That a new queen had been made was quite clear from all this. (*Query.*—Where can a drone be found to mate with her?) Up to this time pollen had been carried in in large quantities, but from the above date until the 19th of May not any—on that day, however, it was resumed as usual.

SUPERS.—Supers should be supplied very cautiously, for the whole of April and the greater part of May has been so exceedingly cold, that the stocks are generally become very weak. The supers, therefore, should not be put on until the bees actually require room, to prevent their swarming.

IS THE TOAD POISONOUS?

A SINGULAR circumstance occurred in my garden lately. In turning over an old Sea-kale pot accidentally, I discovered four kittens, a few days old, which a strange cat had deposited on the dry ground, the pot being the only protection from the weather. Interested in the well-being of the little foundlings, I provided a saucer of milk and other food for the mother, placing them near the pot, and which were regularly consumed. I was surprised on going into my garden, early

one morning, to find the poor cat lying dead in the middle of a walk, without any apparent cause of death; but on looking closer, I found near her a large toad, which had evidently been killed by the cat, and bitten. Is it possible that the old notion of the toad being poisonous, which we have been accustomed to treat as an old woman's fable (although we have Shakspeare's authority for the opinion) is really true? The coincidence, at all events, is singular—cats, when dying from disease, usually select some hidden nook, and not the most open part of a garden, as in this instance, and I am quite sure that neither "Accidental death," or "Wilful murder" could have been returned as verdict by any jury of grimalkins, for there were no grounds of suspicion for either.—S. —, *Wolverhampton*.

TREE MIGNONETTE.

ALLOW me to correct a mistake which appeared in the report of the Northampton Flower Show in your publication. The Tree Mignonette is *not* a different species from the common variety. I think you will find this to be so on examination. Any plant of it will do, only choose a strong one, and as it grows, pick off all the side-shoots and flowers.

I have very lately seen three or four great plants of it, one of a considerable size, which were *made* from little plants taken from the borders. The only care is in the manufacture; for it is not, I should think, the nature of the plant to be stretched up a stick and only allowed to flower at the top. I do not know how they came to be sent out as a different species. The Tree Violet, on the contrary, is a different kind from the common Violet.—L. S. C.

MIS-PELLING THE NAMES OF PLANTS.

You will do a great service to horticulture, as well as the puzzled eyes and heads of gardeners, professional and amateur, if you will remonstrate with seedsmen and sellers of seeds generally, on the grossly careless, inaccurate, and illegible way in which they affix names to the seeds they send out. Some people may think an approximation to a Latin name quite as good as the real name, because the true and the false are equally unintelligible to them; but these names are not given at random, or without reason; and as Messrs. Jones or Brown would justly resent the change of their names into such nicknames as Bones or Crown, it is very hard on the poor flowers, that equal, and sometimes greater, liberties are taken with them.

I have now before me a seedsman's list, in which are the following transmogrifications:—Genera for Gaura, Campanula for Campanula, and now this word, which I can only copy—funtugonin—for I am fairly puzzled, either to read or to make it out.

A few words of rebuke may correct or check the growing inconvenience.—FILLINGHAM.

[The carelessness which once prevailed in spelling the names in nurserymen's lists was so great as to become proverbial; and we perfectly well remember a man of science observing upon his gardener's spelling, that "he must have learned botany out of the trade lists."

Such mistakes are to be deprecated on many accounts, and so much so, that some of our leading Societies stipulate that prizes shall not be awarded to plants improperly named even in spelling.

We do not know to whose list our correspondent alludes, and we must exonerate from the charge the lists of our leading nurserymen and seedsmen. We have often remarked upon their correctness, as an evidence of the progress of education, and to have such correct lists is an evidence of great carefulness, for it is no light labour to correct the errors made by printers in such long arrays of unusual names.

We are glad our correspondent (a clergyman and an amateur gardener) has pointedly remarked upon this subject, for we are quite sure it will be a hint to any who

have been inattentive to the correctness of their lists, to consult their own interests by amending them. The purchaser will always think, that a man who does not spell the name of a plant correctly, knows less about it, than the man who does spell it as it should be spelt.]

QUERIES AND ANSWERS.

GARDENING.

CRASSULA CULTRATA AND MAIDEN HAIR FERN CULTURE.

"I should feel exceedingly obliged if you will tell me the name and proper treatment of the plant of which I enclose a small slip. Although kept in a warm room, with a fire at night, it was much nipped by the late winter frosts. As soon as possible, I removed it to the greenhouse, but when the fire was lighted I fancied it was too hot, as the leaves withered at the ends, and the stems became so very brittle. I had placed it on the flue, and just in the front of the south glass. Had I better keep it in the greenhouse [Yes] (where there must be a fire for some weeks to come for the Vines), or in a room with a south aspect?"

"Will you also inform me whether the growth of a common *Maiden Hair Fern* will be improved by cutting down the stems that have remained all the winter? and, further, if not too much trouble, the best steps to prevent my plants (I have no very tender or choice ones) from suffering from the fire had for the Vines? The house is rather apt to be damp, if I water very freely, and yet the heat seems to try them, and make them long and straggling.—A GREAT ADMIRER."

[Your specimen is from one of those odd-looking, thick-leaved, succulent plants called *Crassula*, and, from the diminutive bit sent, we believe it to be the *Crassula cultrata*, a suitable oddity to stand upon a dry shelf in the greenhouse, in the most sunny place. It should be potted in poor, rubbishy soil, or a sandy loam mixed with pounded brick-dust, or old mortar, or a little of both, with the pots well drained. Any bit of a cutting, planted in the same kind of soil, and placed upon the same shelf, to receive only as much water as will prevent its shrivelling, will root and flourish.

Such succulents as these do best kept in the dry, airy greenhouse all the year round, but during the hot summer months more water is required to them, and in the dull days of winter scarcely any should be given.

The *Maiden Hair Fern* will be improved by removing all the old, dead fronds, and repotting it, if required. Use peat earth for it, and place it in the most shaded part of your greenhouse. As you are keeping your house a little the warmer to forward your Vines, the pots of *Maiden Hair Fern* would be better placed in a pan to contain water at most times, as this plant delights in shade, heat, and moisture; and no class of plants do so well as the Ferns and Lycopods do during the summer months, under the shade of a Vinery, particularly in such a case as yours appears to be. Many of the *Begonias* do pretty well under this shade of Vines. *Gesneria zebrina*, and the *Achimenes*, after being brought forward in the pit or hotbed, flower and do well under the partial shade of the Vines; whilst the Geraniums, and many other greenhouse plants, would soon draw up very slender, and fail. Now, some suitable spot or other should be found for all these, or with some slight protection provided for them, where they could enjoy the benefit of the open air over head on all favourable occasions.]

MEDINILLA MAGNIFICA AND CYPRIPEDIUM INSIGNIS CULTURE.

"AN OLD SUBSCRIBER TO THE COTTAGE GARDENER will be much obliged by information respecting the best method of culture and propagation of *Medinilla magnifica*, and especially of the PROPAGATION. Also of the best method of blooming *Cypripedium insignis* abundantly."

[You will see that Mr. Appleby has fully answered your query relative to the *Medinilla* in this number. In order to

bloom *Cypripedium insignis* abundantly, it must be a well-grown, large plant. Though an Orchid, and a native of Nepaul, it does not require great heat. Where it is grown in a high temperature it does not flower freely. The right heat is 60° to 65° in summer, and 50° to 55° in winter. The highest heat to be in the middle of the day, and the least at night. It should be potted about this time in an open compost of fibry peat two parts, turfy loam one part, and half-decayed leaves one part. The whole mixed with small crocks and pieces of charcoal. It should be grown in rather large pots, well drained; and when growing should have a liberal supply of water, but through the winter it should be kept only just moist enough to keep it from flagging. This, with the lower temperature, gives it a rest, and then it flowers certain out of every shoot. We have seen a plant, so managed, with upwards of twenty of its large, beautiful flowers expanded at once, and continuing in bloom for two months. That plant measured a foot-and-a-half across, and was growing in a 12-inch pot. Like all other Orchids, it requires three seasons—one of growth, one to bloom, and one of rest. A small plant cannot, by any management, produce many flowers. You must wait patiently, and grow your plant, if small, several years before you can have flowers abundantly.]

POULTRY.

DEATH OF A GAME COCK.

"Yesterday a fine Game cock, which had always been very healthy, was found dead in the walk close by my stables, and thinking that some unfair means had been employed by some neighbours to get rid of a customer which they could not vanquish in any other way, induced me to open it. I found the head gorged with blood, and the neck adjoining also very much discoloured, the heart enlarged, and the surrounding parts of a dark colour, with some effusion of blood also dark coloured; the contents of the crop, or stomach, appeared to be healthy, no substance of a poisonous nature, that I could detect. There was also a substance (which I enclose) found in the intestines near the vent. I ought to say, that a week or two ago the bird was seized with something like a fit, or appeared as though he had been hit with a stone, he could not stand properly without occasionally falling on his side. A few days ago, also, he appeared to be very drowsy and moping, going about by himself, and standing for some time with his head down, and his feathers ruffled, as though he was affected by roup, but this was not the case. I ordered him some medicine as an aperient, and he appeared all right again yesterday morning when he was turned out, crowing and strutting about in his usual way, but about twelve o'clock he was found as I have before stated, dead, without any external marks of violence, and I should feel obliged by your opinion as to the cause of death. Could it be the result of a blow? or would these appearances arise from apoplexy?—
A SUBSCRIBER."

[We have little or no doubt the Game cock died from apoplexy, and that this arose from effusion of blood upon the brain. The enlargement of the heart is not at all unusual in birds that have been frequently subject to high excitement, as your Game cock seems to have been. The substance found in the intestines appears to be food imperfectly digested. If your bird was very fat, and highly fed, this would hasten the catastrophe. The best treatment for a bird showing apoplectic symptoms, such as reeling and want of command over its legs, is to keep that bird in a dimly-lighted, cool place, and to feed it upon a limited quantity of soft, unnutritious food, such as boiled rice, and boiled potatoes, with a daily allowance of green food. Exposure to bright light, excitement with hens, and crowing, were all against the Game cock.]

THE WOODS OF AUSTRALIA.

(Continued from page 136.)

THE common use of the wood of the cedar (*Cedrela Australis*) in joiners' and cabinet work, and its extensive

exportation to the neighbouring colonies, and to Europe, have induced the sawyers to penetrate into every nook from whence sawn timber could be dragged out. But, in seeking out this particular tree, they would appear to have neglected all the rest. The most experienced among them have no names for a great number, and can give little information to be relied on with regard to the qualities of their timber. They have been in the habit of confounding together numerous species, under the general designation of "brush trees." It requires careful and laborious investigation, on the part of a stranger in these brushes, to distinguish trees, even of very different families. Their foliage is often so far overhead, and so intermingled with that of neighbouring trees and climbers; their trunks are so covered with epiphytes, and the light is so imperfect, that the tree often requires to be cut down to determine its identity. Even then, it becomes further requisite to cut down several of the neighbouring trees, which have their branches attached to it by the "bush ropes," before the tree will fall and bring the foliage within the explorer's reach. The uncertainty of their periods of flowering and fruiting give rise to further difficulty. On the present occasion, although they have been repeatedly examined, at short intervals, over a period of six months, comprising the seasons at which they might be expected to show flowers or fruit, it is remarkable how few have been detected in a fertile state. These few forming the exception rather than the rule, with the particular species to which they belong, it would appear to be certain that the great majority of the trees of this class do not flower every year, and many of them only at long intervals. In proof of the intimate intermixture of many kinds of trees, it may be stated that, skirting a narrow track through a cedar brush for about half-a-mile, more than sixty species were observed, all growing within twenty or twenty-five yards of the track. Of these, above three-fourths were of the stature of trees. It may be remarked, also, that no two brushes resemble each other precisely. Fresh species of trees make their appearance in each succeeding brush, whilst others disappear. This characteristic seems to prevail, wherever an opportunity of examining them closely has been afforded. The timber of the trees of this class differs remarkably from Class A. The grain is much finer; it is also, for the most part, sound at heart; and the heart wood, if not shaken in the fall of the tree, may be used, as is the case with the timber-trees of Europe. Even when of very large size, and not sound at the butt, they are usually perfectly so a little higher up. They differ generally, also, from the trees of Class A, in splitting most freely the "bursting way." Although their qualities be so little known, it is not to be doubted that some of them would prove of great value. The very imperfect collection of them, which has been made on this occasion, affords evidence that some possess considerable beauty. At the same time, it should be observed, that the timber of a considerable portion is not durable when exposed to the weather or to damp; and that, as a class, they are, neither for strength nor lasting qualities, to be compared with the numerous, more coarsely grained, but almost imperishable woods of Class A.

It is to be regretted that, in offering for the first time to the European world a considerable number of the woods of Australia, so little time should have been available for collecting them. Instead of six months, two or three years would scarcely have sufficed to form a tolerable collection. The necessity, which on the present occasion had existed, of cutting them down whether the season was favourable or not; their exposure immediately afterwards in the sap, and frequently for many weeks, to the action of sun and wind during a season of unusual dryness and aridity, has been injurious to the majority of them, and has caused some valuable timbers to assume a very unfavourable appearance. Some of the woods with the closest grain require to be steeped in water for several weeks immediately after being cut down and sawn up, and afterwards to be carefully dried in the shade. In forming this collection, no precaution to prevent damage from the weather has, for the most part, been available. In other respects, the shortness of the period which could be devoted to the object, the limited funds at command, combined with the difficulty of procuring labour, have all operated to prevent it from representing

more worthily the richness of New South Wales, in woods. Inferior specimens had generally to be taken, because the labour requisite to get out the better was not to be procured; but it was considered advisable rather to secure examples from trees of under size, than to leave the species unrepresented. Even as it is, a great many which are known have not been obtained, and some which were procured have not been forwarded, or, at all events, have not reached their destination. In the Catalogue, the average full-sized dimensions of each species are stated; actual measurement, in almost every instance, having been the authority. The dried specimens of the fronds, which have been procured with the woods, have corresponding numbers attached to them; and, whether in a perfect state or not, as regards their fructification, they may be relied upon, as being, in each case, from the same species as the timber.—*Sydney Morning Herald*.

THE AMERICAN BLIGHT.

THE following essay on the American blight in apple trees was addressed by Mr. McEwin, of Glen Ewin Nursery, to the Committee of the South Australian Agricultural and Horticultural Society, in answer to their advertisement offering a prize for the best essay on the subject:—

"Gentlemen—Seeing an advertisement offering a prize for the best practical essay on the subject of destroying and preventing the American blight in apple trees, I am induced to pen the following remarks, not from pecuniary motives, but from the ardent desire to render a service to my fellow-colonists, especially horticulturists.

"The *Aphides*, or plant lice, of which the American blight, (*Aphis lanigera*) is a species, are universally, next to the locust, the greatest enemy to the cultivator. Their powers of production almost exceed belief, it having been computed by Reaumur that one aphid may produce 5,904,900,000 descendants in five generations, and when it is calculated that there are at least 20 generations in 12 months, we may cease to wonder at the rapid and alarming spread of this devastator.

"This insect is most injurious to the apple tree, and in the larva or apterous state feed upon the juices of the tree, which they extract by means of their proboscis, with which they puncture the bark. These punctures cause excrescences, which become very unsightly; and unless its ravages are checked by the application of remedial measures for its extirpation, the tree soon dies. The species is essentially American in its origin, and made its appearance in a nursery in the neighbourhood of London, where it was brought on some plants of a new sort of apple from New York, and thence it has spread to every country where the apple is cultivated. It was brought to this colony on trees imported from Van Diemen's Land, and its rapid spread here may in a great measure be ascribed to ignorant and unprincipled vendors, who dispose of the infected trees to unsuspecting purchasers who are at the time, perhaps, ignorant of the nature of the terrible scourge. These young trees are planted, probably in the neighbourhood of gardens perfectly free from the devastator, and the inevitable result is its spreading over these by various means.

"1. It may be brought on the feet of birds, which might fly from off a diseased tree with some of the insects adhering to their claws; these alighting on clean trees in any neighbouring garden would be almost certain to divest themselves of some of them.

"2. Streams of water may carry down the insect adhering to the leaves, of which the trees are denuded in the winter season, and may be deposited in an orchard lower down the stream, and thence might easily gain the trees.

"3. High winds will carry the insects a long way, as they have the faculty of throwing out a substance like gossamer, by means of which they are floated by the wind, and wafted, it may be, to an apple-tree, if it unfortunately happen to be in their course.

"4. The male insects are furnished with wings in February and March, by means of which they can fly short distances, and by that means the female might be carried to a neighbouring garden.

"5. Persons may, by rubbing against the leaves of diseased trees, cause some of the insects to adhere to their

clothes, and by that means unsuspectingly communicate the blight to clean trees.

"And, lastly, animals, such as dogs, cats, &c., may in like manner spread the infection.

"In whatever light, therefore, we view the evil, it presents itself as one of great magnitude; and in order successfully to grapple with it, we must have recourse to *stringent preventive measures*, or, if we fail to do so, we may despair of ever seeing fine old apple-trees in this colony, such as we have been accustomed to look on with pride in England.

"It has often struck me forcibly that a legislative enactment for the prevention of the spread of the American Blight in apple-trees, similar to the Act for the prevention of Scab in Sheep, would be the means of doing much good, and, as a suggestion, I would strongly urge it upon the attention of your Committee as worthy of consideration. I would put a case in this way:—Am I, who may have spent a large capital in forming and planting a garden, and who may have waited patiently on the harvest of fruit, to be at the mercy of a neighbour who may have, perhaps, only a single tree in his garden, and that a *diseased one*, which would certainly disseminate the infection to my trees? Thus the inevitable consequences to me would be most disastrous, while, on the other hand, he would have nothing to lose. All men ought to be equal in the eyes of the law, but in this case we are not; for the sheep-farmer has his remedy against those who have diseased sheep, while I have none, but must submit quietly to be ruined, by the carelessness, or, it may be, maliciousness, of a neighbour.

"But to come to remedial measures within the reach of every cultivator, I would particularly notice that it may be subdued most effectually by using a stock which the insect will reject, and I trust that such will be employed by nurserymen ere long. I am aware of the existence of seedling trees, in three different gardens, not subject to the blight. In two of the gardens, the branches of the diseased trees (now dead) intermingled with them, and yet they are now perfectly clean. The other tree is in a garden, and grows by the side of a creek, and is surrounded by blighted trees, the roots of which were washed bare by a flood, and were found to be intertwined with the roots of the blighted trees, *every one of which were thickly covered with the aphid, while its roots were entirely free from it*. By employing a stock not subject to the blight, preventive operations may be successfully employed, as its ravages would then be confined to the parts above ground, which would be within the range of possibility to clean; but if the pest gets on the roots, which it will do on the ordinary stock, *it will defy eradication*—the cultivator may employ all the remedies he can think of, he may even bare the roots and trace them as far as possible, it will soon reappear as bad as ever, in defiance of his utmost exertions.

"Infected trees, while young and out of the ground, may be radically cured by immersing them, root and branch, in strong tobacco-water and nux vomica, in the proportion of one pound of tobacco and one ounce of nux vomica to four gallons of water, the whole to be well boiled. Previous to immersion, the trees should be washed in clean water, and any infected spots, which may then be easily seen, must be cut clean out with a sharp knife. The trees must remain in the liquor at least one hour, and, after taking them out, they may be rinsed in clean water. It would be very desirable before planting to dip the roots in a thick puddle, of the consistency of mortar, made up of three parts fresh loam and one part cow-dung, adding water sufficient to liquefy the mass. The plants must be narrowly watched during the growing season, and if the insect should make its appearance, the infected tree ought to be carefully taken up and burnt, and the spot on which it grew must be scalded with boiling water, or have some litter burnt over it.

"Trees planted out in orchard or garden ground ought to be frequently examined and kept free from suckers, as they are, in nine cases out of ten, the medium by which the blight gains the roots of large trees.

"If it should make its appearance, vigorous measures must be at once adopted to destroy as many insects as possible, by crushing them between the fingers, and cutting out the small infected branches, using the following mixture for the main stem and branches:—Three ounces of soft soap beaten up in a small quantity of water; add to this a quart of unslacked lime and four handfuls of sulphur;

mix well, and then add a gallon of stale wine, and as much clay as, when well beaten up, will make a thick paint. This must be well rubbed into all the chinks and crevices of the branches with a stiff paint-brush. It will destroy the bug wherever brought into contact with it. The tree must be repeatedly examined, and if the insects show signs of resuscitation, the operation must be repeated of well brushing with the mixture the stem and branches, not omitting to examine the main stem to the depth of six inches or so under the surface of the soil. I have already observed, that if the aphids gets fairly established on the roots of the apple-tree it is in vain to attempt its extirpation, and the only course left is to root the tree carefully up and burn it, to prevent the spread of the pest to other trees, observing, as before directed in the case of young plants, to burn some litter on the spot where it grew.

"There are numerous receipts by almost every author on gardening, all of which have been successfully employed as palliatives only, for although its numbers may be considerably reduced, so much so that its operations may escape notice, it rarely happens that the insect is totally exterminated from any district in which it may have established itself. If we could by any means propagate at will the useful and beautiful little insect, the lady-cow (*Coccinella L.*), which feeds entirely upon the aphides when its larva state, our orchards would soon be cleared from the ravages of the blight. I examined some apple-trees in my neighbourhood in November last, which were literally swarming with blight, and observed quantities of the larva of the lady-cow devouring the aphids; and on examining the same tree about a week afterwards they were perfectly free from the insect, and its devourer had also disappeared.

"In conclusion, I would observe that the foregoing remarks are not the result of mere empiricism, but I had for my guide science, a pilot needed even by the most experienced; and I would sum up in the words of that celebrated and science horticulturist, Mr. Knight, that 'Physiological knowledge can alone now direct the gardener to improvement, for he possesses all that mere practice is likely to give.'

"I have, &c.,

"GEO. Mc EWIN.

"Glen Ewin Nursery, February 8, 1855."

TO CORRESPONDENTS.

* * We request that no one will write to the departmental writers of THE COTTAGE GARDENER. It gives them unjustifiable trouble and expense. All communications should be addressed "To the Editor of The Cottage Gardener, 2, Amen Corner, Paternoster Row, London."

PRESERVING VEGETABLES (R. Howell).—What do you mean by "preserving vegetables green?" Do you mean in sugar, or as dried specimens? There is no separate work on either.

PINE PIT FOR VINES (Peter Pindar).—There is no reason why you should not substitute Vines for Pines if the pit is large enough. You need not remove the hot-water pipes. The three first volumes of THE COTTAGE GARDENER for about twenty-two shillings.

DEFECTIVE TURF (J. G.).—Sow the Grass-seed at once. You may raise the turf, so as to level it where sunk, in the autumn.

CRYSTAL PALACE HORTICULTURAL SHOW (A Royal Forester).—You may obtain a schedule of prizes by applying to "G. Grove, Esq., Secretary, Crystal Palace, Sydenham."

PROPAGATING CINERARIAS (M. M.).—New varieties are obtained from seed; old varieties are multiplied by offsets.

CALENDAR FOR JUNE.

ORCHID HOUSE.

AERIDES, SACCOLABIUMS, VANDAS, and other allied Indian plants, will now be growing freely, and will require abundance of water both at the roots and over the tops. Any on blocks that are growing freely should have some moss tied round the block to retain moisture a longer time. **AIR** should now be liberally given almost every day, unless cold, wet days should intervene. The air openings should be so constructed as not to allow a rush of cold wind over the tops of the plants. **BASKETS:** the plants in them will be making their new growths, and will require to be dipped in tepid water at least once a week, or even oftener in very hot weather. **BLOCKS:** syringe twice a day, in the morning by seven o'clock, and in the afternoon about four. **CATESETUMS, CYRTOPIDIUMS, CYNOCES,** and their like, give plenty of water at the root, taking care that none lodges amongst the young leaves for any length of time. **DENDROBIUMS:** many of this fine family will, towards the end of the

month, have finished their growth. They should then be placed in a cooler house, and less water given to them. **HEAT:** the natural heat of the atmosphere out-of-doors renders less fire necessary. During the day, unless in cold, wet weather, none will be needed, a little every night will yet be useful, especially in the Indian-house. **INSECTS** will breed rapidly during this warm season; every means must be resorted to to keep them under. **MOISTURE:** the air of the house should be kept full of moisture during this month. Many of the roots will be dangling in the air, sucking up, as it were, the moisture in it. Moss on the outside of the pots, and on the leaves, will accumulate greatly with the heat and the moisture; the pots must be washed, and the leaves sponged frequently, to open the breathing pores of the latter. **OFFSETS** on the stems of *Dendrobiums* should be all taken off, to encourage growth from the bottom; they may be made plants of if required. **PLANTS IN FLOWER** will last much longer if removed into a cooler house. **SYRINGE:** this instrument will, during the month, be in constant requisition. In using it, let the water from it fall gently upon the plants, imitating a gentle shower of rain. **SHADE** must be applied during bright burning sunshine. **WATER,** apply liberally to all growing plants, but be sure and use soft or rain water. A slate tank is the best thing to contain it; iron vessels should by all means be avoided. **WEEDS,** destroy constantly; but such plants as Ferns, Heaths, except creeping species, that come up amongst the rough peat, may be allowed to grow, they will shade the roots, and serve as indicator, when they flag, to show that the compost is dry and requires water. T. APPLEYBY.

PLANT STOVE.

ACHIMENES: those early potted will now be in flower; supply them freely with water; repot the last batch to flower late. *A. picta* put thickly into wide, shallow pans, and grow on to flower at Christmas. **AMARYLLIS,** going out of bloom, and their bulbs ripening, place in a cold frame, and give no water to induce them to rest. **AIR,** give liberally all day, and in hot, close nights leave a little on. **APHELANDREA AURANTIACA,** grow on in a hot pit to bloom in winter. **BASKETS,** where used, keep moist by dipping and syringing frequently. **BARK-BEDS,** renew, if the heat declines. **CUTTINGS,** put in if required; pot off such as have struck root. **CLIMBERS,** on the rafters, train, and keep within bounds. In pots, train round the trellises; attend to them constantly, or they will soon get out of order. **FRANCISCEAS** done flowering, place in a cold frame to rest. **GARDENIAS,** treat in a similar way. **GESNERAS,** repot young plants, put in cuttings of. **GLOXINIAS,** the same; every leaf will make plants if put in as cuttings. **HEAT,** keep under, no fire heat is required now. **INSECTS** of all kinds, destroy diligently, especially the Red Spider and Mealy Bug. **IXORAS,** the large specimens will now be in flower; keep them moist at the root, but refrain from syringing over the bloom; young plants repot, and tie out young specimens. **MOISTURE** in the air, keep up by flooding the walks daily. **PLANTS IN FLOWER,** keep cool, and shade them, this will prolong the bloom. **POTTING,** do whenever it is necessary. **SEEDS** of many stove plants may yet be sown; transplant seedlings when just out of the seed-leaf. **SYRINGE,** use daily. **WATER,** apply liberally, but not so as to sodden the soil. **TOP-DRESS** the whole stock of plants during the month, it refreshes and gives them a neat, clean appearance; wash the pots if mossy. **WEEDS,** constantly eradicate. **WORMS** in pots, destroy with lime water. T. APPLEYBY.

FLORISTS' FLOWERS.

AURICULAS and **POLYANTHUSES,** place on ashes behind a north wall, in the shade; keep clear of weeds, and constantly supplied with water. Seedlings prick out in shallow pans or boxes. **CARNATIONS** and **PICOTEEES,** place on the stage; put stakes to, and water freely. **CHRYSANthemums,** pot; plant out some old plants to layer and form dwarf plants. **DAHLIAS,** finish planting; put stakes to early; put in cuttings of new or scarce kinds. **FUCHSIAS,** pot off cuttings; train specimens, and water occasionally with liquid-manure. Sow seed of **HOLLYHOCK;** put stakes to; prick out seedlings. **HYACINTHS** out of bloom, take up and store. **INSECTS,** destroy. **PANSIES,** water freely in dry weather; put in cuttings of; sow seed, and transplant; layer long, straggling shoots; shade from hot sun. **PINKS,** tie to sticks; place Indian-rubber rings round the buds when more than half grown; transplant seedlings; put in pipings. **RANUNCULUSES,** keep very moist; place shades over them as the blooms expand. **ROSES,** look to the buds, and destroy by crushing the worm in the bud. Put such as are in pots, and have done blooming, in a cold pit, or in the open air in a shady place. **TULIPS,** cut off all seed-vessels, and take up the bulbs as soon as the leaves decay. **VERBENAS,** in the border, shade from sun; peg down the long branches in pots; tie out, keep moist, and shade. **WATER,** give to all in pots freely. T. APPLEYBY.

FLOWER-GARDEN.

ANEMONES, take up as leaves wither; dry and store. **ANNUALS** (Hardy and some Tender), plant out to remain, in showery weather best; sow for late crops; some (hardy) may be sown, b. **AURICULAS,** continue shading; plant offsets; prick out seedlings. **BASKETS,** or clumps, form of greenhouse plants. **BEDS,** attend diligently to recent planted; water and stir them in dry weather. **BIENNIALS** and **PERENNIALS,** sow, if omitted, b. Box edgings clip. **BULBOUS ROOTS** (Tulips, Jonquils, &c.), not florists' flowers, remove offsets from; dry and store; may transplant some, or keep until autumn; autumn-flowering, as *Colchicums*, &c., take up as leaves decay, separate offsets, and replant, or not until end of July. **CARNATIONS** in bloom, attend; aid the bud-pod to split with a pair of narrow sharp-pointed scissors; bandage buds, to prevent bursting, with Indian-rubber rings, or tape; water every second day; tie to supporters, &c.; prick out seedlings; make layers. **CHRYSANthemums,** plant out to layer next month. **CYCLAMENS,** transplant. **DAHLIAS,** finish planting out, b. **DRESS** the borders assiduously; neatness now stamps a gardener's character. **FIBROUS-ROOTED** Perennials, propagate by cuttings; shade and water. **FLOWERING PLANTS,** generally, require training and support. **GRASS,** mow, roll, and trim edges. **GRAVEL,** weed, sweep, and roll. **HEDGES,** clip, c. **LEAVES** and stems decaying, remove as they appear. **LIQUID MANURE,** apply occasionally to all choice flowers. **MIGNONETTE,** sow for late bloom, b. **MIMULUSES,** plant out. **PÆONIES** (Chinese), water freely with liquid

manure, or they will not flower finely. PINK SEEDLINGS, prick out; make layers. PIPINGS (or cuttings) of Carnations and Pinks may be planted. POTTED FLOWERS, dress, stir earth, and water regularly. RANUNCULUSES, take up as leaves wither, dry and store. ROSES, bud, lay, and inarch; fumigate with tobacco to destroy the aphid or green fly; Roses out-of-doors, wash with tobacco or ammonia water. SALVIA PATENS, pinch down centre stem to make it bushy. SEEDLINGS of Perennials and Biennials transplant. SEEDS, (ripe) gather in dry weather. SEED VESSELS, remove, to prolong flowering. WATER, give freely and frequently to all newly-moved plants, and to others in dry weather; early in the morning or late in the evening is the best time. Brompton Stocks and Moss's Intermediate should be sown on a north border. Sow another succession of the low annuals to flower late, b. Peg down *Salvias*, and for a time, until the layers are rooted, cut off the flowers. VERBENAS, peg down to cover the beds sooner. TULIPS, continue to shade to prolong the bloom, b.; towards e. expose them to full sun to ripen the bulbs; take off seed-vessels for the same purpose. SLIPS of Double Wallflowers, Sweet Williams, and Rockets, put in either under handglass, or under a north wall or low hedge. D. BEATON.

ORCHARD.

APHIDES, destroy on all trained-trees. APRICOTS, thin for tarts, destroy caterpillars. APPLES, search for caterpillars, and dress for American Blight. CURRANTS, stop watery wood. CURRANTS (black), water if dry; cleanse from fly. CHERRIES, free from aphides. Disbud all trained trees. FIGS, thin the young wood, and stop. FRUIT of all kinds thin where too thick. GOOSEBERRIES, free from caterpillars. INSECTS in general try to extirpate. MULCHING, practice where necessary. NECTARINES: see Peaches. NUTS, dress away suckers. PEACHES, thin both wood and fruit, and stop gross shoots. PLUMS, cleanse from aphides, and disbud. PEARS, disbud and stop. RASPBERRIES, thin suckers. STRAWBERRIES, water if dry, clean runners, and put something to keep fruit clean; beware of mice. STRAWBERRY (ALPINE), clear runners from, and water. STOPPING, practice constantly, where necessary. THINNING, practice with both fruit and wood. TRAINING, commence and continue. TOP-DRESSING, attend to. VERMIN, destroy. VINES, thin shoots, and stop. WATERING, attend to. WASPS, destroy. R. ERRINGTON.

FORCING STOVE.

ATMOSPHERIC MOISTURE, secure liberally, and continue to increase. CUCUMBERS, keep thinned and stopped; give plenty of atmospheric moisture to. CHERRIES, water liberally, and cleanse from aphides; ventilate very freely. CAPSICUMS, shift finally and place in a warm situation. FIRE-HEAT, dispense with as much as possible. GRAPES, thin, stop, and tie shoulders of the late ones. GRAPES ripening, remove a few laterals. LIQUID MANURE, apply where strength and size are required. MELONS, attend to setting, water freely, but not frequently, when swelling; thin the vines very frequently, and attend to linings; use dressing and fumigations to avert the attacks of insects. NECTARINES, treat as Peaches. PEACHES, disbud, and stop gross shoots; apply liquid manure, and thin fruit. PEACHES RIPENING, remove those leaves or portions which shade the fruit. PINES, shade for a few hours if the sun is intense; shift liberally the succession; water all when necessary, and keep a jealous eye on bottom-heats. STRAWBERRIES, turn out healthy plants from forcing-house; they will fruit in September. SHADING, practice with delicate things, during intense sunshine. VINES, attend to disbudding and stopping. VENTILATE freely. WATERING, neglect not. R. ERRINGTON.

GREENHOUSE.

AIR, admit freely to all the hardier plants, such as Cinerarias, Calceolarias, &c., as the cooler they are kept the longer will they bloom, and the freer will they be from insects. The HARDIER PLANTS should now be placed out-of-doors, in a sheltered place, to make room for fresh importations from the pits; and here arises the great difficulty in the case of those who have only one house, as the plants removed, intended to be kept for another year, would have been all the better to have been kept in until the fresh wood was made. Many winter-flowering things, such as *Daphnes*, *Cytisus*, *Heaths*, &c., may now be set in a sheltered place out-of-doors, and safely kept; but they will neither bloom so fine nor yet so early as they would have done had they been kept longer in the house. Another difficulty arises from the wish to make this single greenhouse suitable for plants in bloom requiring a cool atmosphere; and plants done blooming, such as early *Camellias* and *Azaleas*, that require a high temperature, and a moist atmosphere, to enable them to make their wood and set their buds early. Any greenhouse may now be used admirably for this purpose, merely by shutting it up early in the afternoon; syringing the plants at the same time, and give but little air during the day; but then this would soon ruin the health and appearance of such things as Calceolarias, &c., in bloom; though it would answer well for bringing on large Fuchsias and Geraniums for succession. Hence the importance of screens, &c., for securing different temperatures. PLANTS, placed at first in a sheltered place, must in general be fully exposed before autumn, to perfect their wood. Altogether, after the few days shading at first, the pots, or rather the roots in the pots, suffer more from complete exposure than the branches. The great thing is to avoid sudden extremes. Cacti will now want watering freely, and full exposure to sun, to have the flowers fine, or perfect the wood of the early kinds. CUTTINGS insert, and pot off when struck; many of the first struck will make fine plants for autumn and the beginning of winter. CLIMBERS—many tender annuals, such as *Thunbergia* and *Ipomea*, may now be introduced, either upon pillars or trellises. Nothing suits annual kinds better than a young tree, or the branch of a tree, well stored with twigs. *Kennedya*s and *Zichyas* fasten to pillars and trellises, so that the flowering shoots may hang gracefully and negligently. The same may be said of *Passifloras*, &c. CLEANLINESS must be particularly attended to. No plants can be healthy with yellow or dust-encrusted leaves; and the sight of such is always a speaking reproach. The system of picking off every yellow leaf that presented itself as you went round with the watering-pot would prevent the woe-begone aspect which yellow-leaved plants

always wear. It always shows a want of system when a set period must be appointed for picking the dead leaves from plants. GRAFTING may still be done, in the case of Myrtles, Oranges, Daphnes, Camellias, &c.; but, as it is getting late, you must try and obtain scions from retarded plants, and then place them in a gentle hotbed, and keep them close until the union is effected. ORANGES and LEMONS should have the blossom thinned and impregnated where fruit is wanted. SEEDLINGS of all kinds prick off. See what was lately said about *Achimenes*, *Gloxinius*, *Gesneras*. Every one with a cucumber-box, and a cupboard in his kitchen, may stock his greenhouse with them in summer. SHIFT everything that requires it, for all vital action is now rapidly progressing. SOILS procure, and husband in a dry state; for top-spit turf, nothing is better than stacking it in narrow ridges, and thatching it to keep it dry. This kept a twelvemonth will be fitter for use than mould regularly turned and chopped ever so often during the season. TORENIA ASIATICA is now a fine object in a greenhouse; it looks most elegant in a vase, elevated a foot or eighteen inches with sprigs, and the most of the shoots allowed to dangle over the sides of the vase. WATERING will be required oftener; and, in small pots, sometimes twice a day. Manure-water may be given liberally, to promote luxuriant growth when wanted. Let it be weak, however, and given often. Young hands often make great blunders in using it too strong, especially when plants are young.

R. FISH.

KITCHEN-GARDEN.

ALEXANDERS, earth-stir and earth-up. ANGELICA, earth-stir, or earth-up, as the case may require, and promote strong growth with liquid-manure water. ASPARAGUS seedlings, keep clear of weeds, and earth-stir to promote growth; beds in cutting sprinkle with salt once a week during the cutting season, and earth-stir often with some pointed implements; discontinue cutting about the 20th. BASIL, plant out in rich warm borders in full crop, and water well previously to planting, should the weather be dry. BROAD-BEANS, plant out for late crops in cool situations, in a rich soil, and water well at the time of planting in dry weather. BEETS, thin out, and fill up any vacant spaces; do this of a dull evening, with care, and water well at the time. BORAGE, thin ten inches apart, and save seed from autumn-sown. BROCCOLIS, prick out of all kinds, four to six inches apart every way. BRUSSELS SPROUTS the same. BROCOLIS the same, and plant out finally of early kinds, such as the *Cape* and *Walcheren*. CABBAGES, prick or plant out finally. CARROTS, thin out main crops five to seven inches apart, and use the hoe freely among them. CARDOONS, thin out and attend to. CAULIFLOWERS, prick out, or plant out in succession; basin up the early crop, and water well, and with manured water at least once a-week, and look over and invert a few leaves down over the heads of those that are turning in, to preserve them of a white colour. CELERY, prick out, and plant out finally, and water well at the same time. CUCUMBERS, plant out under hand-glasses on a little bottom-heat; keep the glasses close, until the plants are established, after which inure them to the open air by tilting, &c. Those in a forwarder state, let the earth round the hills or ridges be well forked up for the roots to run out; stop and train out their stems; those in pits and frames should be weekly attended to, as to stopping and thinning, and all decayed leaves removed, and a top-dressing given if required. CAPSICUMS, plant out in warm borders. ENDIVE, make a little sowing of both kinds. *Batavian* and *Green Curled*, for early use. GARLIC, SHALLOTS, and UNDERGROUND ONIONS will be fit to take up towards the end of the month, and should be dried off well before being stored away for use. HERBS of all kinds should be cut when in flower for drying or distilling. JERUSALEM ARTICHOKEs, keep clear of weeds. KIDNEY-BEANS, dwarfs and runners, sow for late and last crops, and should the ground be very wet at the time of sowing, give a thorough soaking of water, which will cause them to vegetate quickly; attend to sticking and earth-stirring among advancing crops. LEEKS, thin out and transplant. LETTUCES, sow often, and thin out early; they should be sown where they are to remain, to mature their growth; place strong sticks to those intended for seed to tie them to, and tie in a few weekly for use, according to consumption. MELONS, lose no time in planting out for late and last crops; look daily to those setting their fruit; attend to this setting and stopping about eleven o'clock in the forenoon, and to top-dressing and earthing up, &c., about three in the afternoon of a fine calm day, after which sprinkle with water, and shut up early; giving an abundance of air to those ripening off their fruit, and be sparing of water among them. MINT, keep clear of weeds. SWEET or KNOTTED MARJORAM, plant out in rich, warm borders. ONIONS, pay particular attention to early thinning-out, and surface earth-stirring, or fill up any vacant spaces, by transplanting. PARSLEY, sow or thin out, and transplant. HAMBURGH PARSLEY, thin out. PARSNIPS, finally thin out eight to ten inches apart, and use the hoe freely among them. PEAS, any of the tall *Knight's Marrow* kind may be sown the first of this month, the earth being thoroughly soaked with water, should the weather be dry; but towards the end sow any of the dwarfed early kinds, such as *Early Warwick*, &c.; attend to hoeing and sticking advancing crops. POTATOES, attend to surface-stirring or earthing-up without injury to the young fibre. RADISHES, sow often in cool situations, in rich soil. SAVOYS, prick and plant out finally. SPINACH, sow in succession, and thin out. SEA-KALE, attend to surface-stirring and thinning-out old crowns, if not already done; seedlings thin out; cut away any flower-stems unless seed is required. SCORZONERA, SALSAFY, and SKIRRETS, thin out from four to six inches apart; use the hoe freely to encourage growth. TURNIPS, sow, and thin out young crops. VEGETABLE MARROWS, lose no time in planting out. THYME, plant out seedlings, b. Use the hoe freely in dry weather; attend to all kinds of pricking or planting-out in rainy weather, or during evenings, as very much may be done in this way at that time of the day during very dry and hot weather; for pricking-out, let the beds or borders be dug up, made neat, and lined out, and thoroughly well watered an hour or two before hand, and again after planting.

T. WEAVER.

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WEEKLY CALENDAR.

D M	D W	JUNE 5—12, 1855.	WEATHER NEAR LONDON IN 1853.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in Inches.						
5	TU	Elater pectinicornis.	30.110—30.038	62—49	N.E.	—	48 a 3	8 a 8	0 21	20	1 56	156
6	W	Elater cupreus.	30.083—30.040	59—47	N.E.	—	47	9	0 44	21	1 46	157
7	TH	Elater ferrugineus.	30.070—30.043	57—45	N.E.	—	47	10	1 2	22	1 35	158
8	F	Elater ephippium.	30.073—29.980	65—48	N.E.	—	46	11	1 16	23	1 24	159
9	S	Elater rufipennis.	29.961—29.929	64—46	N.W.	—	46	12	1 29	24	1 13	160
10	SUN	1 SUNDAY AFTER TRINITY.	29.908—29.881	66—40	W.	—	45	13	1 42	25	1 1	161
11	M	ST. BARNABAS.	29.870—29.654	65—55	S.W.	01	45	13	1 59	26	0 49	162

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 70.2°, and 47.7°, respectively. The greatest heat, 90°, occurred on the 7th, in 1846; and the lowest cold, 35°, on the 8th, in 1838. During the period 109 days were fine, and on 87 rain fell.

WE have always been opposed to *Emigration* as a system for reducing the amount of our labouring population. It may for a time mitigate distress and discontent, but it can be only for a time. The crop of children will annually come forward, and bring about the superfluity of population. Let all statesmen remember, also, that every family removed to Australia, America, or elsewhere, is not merely a fractional reduction of our country's strength, but weakens the love for that country of far many more who remain behind. They who have children, and brothers, and sisters, and old neighbours, settled happily on the other side of the Atlantic, care less for remaining on this side. Emigration, beyond all dispute, weakens patriotism.

We have always considered education—that sound discipline and instruction which promotes provident habits and checks early marriages—to be one of the most legitimate regulators of population. If to this were added an enlarged system of reclaiming our waste land, there would be no need of Emigration—no thinning and weakening of our labouring classes—for many generations yet unborn.

In England, Scotland, and Wales, according to the statement made to a Committee of the House of Commons, there are only about 14,000,000 of acres of arable and garden ground in cultivation, whilst 10,000,000 of acres remain waste, yet capable of improvement. That it is capable of improvement, we have this week a statement of what has been effected on a portion of *Dartmoor*, one of the wildest wastes of England. Mr. Fowler, of Prince Hall, who farms extensively, and has reclaimed many acres of land on the Dartmoor Hills, held an auction, recently, for letting his grass lands. There was a spirited competition for them, and it concluded in twenty acres of grass, in two lots, being let for £54 10s., from the beginning of May until the 8th of November next. This same land, which Mr. Fowler has reclaimed from the waste, let in 1846 for only seventy shillings!

Ireland has a still greater proportionate surface of cultivatable waste than the other parts of the British Isles, her number of cultivated acres being about 12,000,000, and of reclaimable waste, nearly 5,000,000.

MISCELLANEOUS REMARKS ON FRUITS.

By the time these remarks reach the readers of THE COTTAGE GARDENER most persons will be in a position

to guess as to their fruit prospects for the present year. I have been looking closely over mine this morning, May 27th, and find much to rejoice in,—something to lament, and something to doubt. On the whole, I am of opinion that we shall have what is called a fruit year; but by this, I do not for a moment mean plenty of all kinds of fruit. It is most probable that there will be heavy crops, in places, of Apples, Pears, and Plums; as for bush fruit, they have with us escaped almost unhurt, although we had a thermometer all but at zero. But herein we northerns have one point in our favour, as compared with our southern counties; we blossom later; and if I be right in affirming this, it just proves that the artificial retardation of the blossom is a principle which must not be lost sight of.

Here I cannot forbear pointing to one of our new nostrums used to promote the setting of Pears, which consists in getting possession of a good pair of scissors, and not being particularly shy in the use of them. Some French gentleman, I am told, has discovered that one of the chief reasons why Pears do not set their blossoms, is because the blossoms are too thick; they cannot all be suckled. This does, indeed, seem strange; and the first question it gave rise to in my mind, on hearing the news, was—How is it our huge, old orchard Pear-trees, which have stood the pitiless blast for a century or more, and which produce annually bushels of fruit, and thousands of spurs for the future crop; how is it, I repeat, that they continue to cause so much trouble in gathering their produce? Of course, such are not to be met with very commonly within the sound of Bow bells; but if the good people of Bow would take a six hour's ride by the Great Western or the North Western, they might soon drop on hundreds of cases of a most satisfactory character.

Now, this thinning-out of the blossoms must surely have some connection with the Quince tock question; for I must confess, that with every desire to see the Quince stock superseding the free stock in all kitchen-gardens, I must, at the same time, bear witness to certain infirmities incident to that stock. I have, indeed, known cases in which I should not doubt that thinning-out the blossom-buds would have a beneficial effect; but I cannot say that I ever knew this with a Pear, or the free stock, unless it was in a sickly condition. Another sad fault of the Quince stock, and one which I have named before in these columns, is this—the Quince stock forces the blossom out earlier than the free stock. This I feel assured of; and as we cottage gardeners have a duty to perform to the public, irrespective of this man or that in stating such things, we must say, that if the principle of artificial retardation be admitted, this is another drawback on the Quince. I have closely watched the development of fruit-blossoms here of all kinds, since the blossoming commenced, and on that memorable night, the 4th of May, when the thermometer indicated at least ten degrees of frost, and when we had ice a quarter-of-an-inch in thickness in a few hours, all the blossoms of Cherries, Pears, Plums, &c., which

were expanded were utterly destroyed. And, indeed, all that had began to show the white in their corolla were in the same predicament.

But, there has been such a profusion in the show of blossoms this spring, and, moreover, it has been so fitful in its development, that the chances of a good set have been exceedingly multiplied. Hence, there is little doubt that in the north, generally, those who have retarded and protected as well will have a fair share of success. But such a late blossoming I have never known; indeed, everything is, and has been, six weeks later. I have lately heard spring birds warbling certain sounds which have been familiar to my ear, for the last forty or fifty years, as a March affair, in the middle of May. Even the "Black Thorn winter," which every school-boy looks forward to as a real old English concern, has only arrived here during the last ten days.

We have now what is called a trimming time of it; north-easters day and night, and the most intense sunlight over head—all is aridity.

At the risk of being charged with a tedious digression, I feel tempted to observe, that the drought at present prevailing in this quarter wears a most serious aspect. The protracted winter and spring has scarcely left a hay-stack in this county. Hay, now, inferior hay, as our cockney friends would call it, at £5 and £6 per ton, with a prospect of speedily reaching to £7.

All the world knows that this is the centre of the great Cheshire cheese district, and that most of the dairy stock calve in April. We learn, this day, that many farmers, having such a demand for grass for their milking stock, have been compelled to turn their cows on to their hay-grass. A pretty prospect this for another winter; and to add to the prospective evil, the Oats are looking very poor in general; and Oat straw in Cheshire is of immense importance, especially when hay stacks are scarce. Our readers will, no doubt, pardon me for stepping aside for a moment, stirring events sometimes justify a little departure from the case in hand.

To return to the fruits. We advise our readers to look well after two matters; the first, to wage an earnest war against all insects; the second, to betake themselves to the mulching system forthwith, where requisite. I advise this on the assumption that the present drought is very general. The Peaches and Nectarines have, of course, been cleansed long since; let us now point to the Cherry fly. If wall or trained Cherries are worth growing, they are worth growing well; and this cannot be done if the black fly is permitted to reign unmolested. The old maxim—"A stitch in time," is the thing; more certain, more economical by far, both as regards material and labour. Once let the rogues so pervert the sap, and so rob the tree of its juices, that the leaves curl up, and you at once lose all command over them. The same may be said of the Black Currant, which soon sinks immediately under such circumstances. As for the Red and White Currants, they can stand a tolerably hard campaign.

We are now in the month of June; with this month the character of the future tree, as also fruit in the ensuing year, must be determined. Neglect this month, and we shall hear you talk, next spring, of your horrible climate, your bad soil, your blights, and more mishaps than anybody else has suffered. Let us at once shake off excuses.

R. ERRINGTON.

HYBRID PERPETUAL GERANIUMS.

WITH the exception of the China Rose, the original Noisette Rose, and the old Musk Rose, I do not remember that we had any kind of Roses which bloomed in the autumn when I began gardening. Whence, therefore, came the Hybrid Perpetuals of the present

day? Whence, indeed; but that is not the question which I mean to write about to-day. At the time referred to, or between 1820 and 1830, we had several Geraniums which bloomed not only in autumn, but from April to October; and my question is this, Why have we not succeeded in producing a race of Hybrid Perpetual Geraniums between these perpetual flowerers and the summer-flowering Pelargoniums of the florist kinds?

In 1830, it would have been easier to work into, or work out, a new race of autumnal-flowering Geraniums than to originate Hybrid Perpetual Roses; but at that time there was no demand for the bedding Geraniums. The system of bedding plants was then in its infancy, and we had no conception of the value of Hybrid Perpetuals, either in Roses or Geraniums; but now that the French growers have loaded us with all kinds of autumn flowering Roses, we seem to want the extension of our Geraniums, or Pelargoniums, in the same direction. We have all along kept a-head of all foreigners with seedling florist Pelargoniums, and the field is in our own hands; but we have hitherto neglected its extent and capacity; yea, we have hardly acknowledged, yet, that Hybrid Perpetual Geraniums are possible of attainment. However, there can hardly be a question on the subject. Pelargoniums are just as capable of being extended into the autumn in full bloom as the Scarlet Geraniums or the Bourbon Roses, and that is what they must come to some day; for we cannot rest satisfied for ever with running in a circle, which gives us May and June flowers only; the whole system *must* be changed. New books must be written about the treatment of Hybrid Perpetual Geraniums; no "cutting" of them till they are frost bitten; no potting of them in October, or in January either, for May blooming; for we must have them to bloom from the middle of May till the middle or end of October. How is this to be done? and who is to set about it?

The florist is so tied down to the circle that he will not hear of it. The amateur is only beginning to ask questions about which he is to cross, so as to be on a par with the florist, and to escape from his 42s. and 21s. seedlings; but this will never do. You may as well try to put down steam, as to shake the "balance of power" in the hands of the florist. He has the run safe enough, and is able to keep it to the end of the chapter; and one of the wildest schemes which was ever thought of, is for an amateur, or a gardener either, to think of ever getting up to the winning-post against the florists.

No, we must first rid ourselves of all ideas of improving on the circle; then we must see and acknowledge the necessity of a new race of autumn-flowering Geraniums, and give a fair welcome to whatever comes, at first, from the cross-breeder, by giving a good price for it, until we can make it appear that the plants will pay; and self-interest will then, doubtless, work out the problem, as in other branches of the trade.

We all know, by this time, that a good, new, and very distinct bedding Geranium will pay in the market as well as *Governor General*, or *Petruchio*; and most of us know, or ought to know, how many good bedding Geraniums we possess already; then, by crossing the best of them with such Pelargoniums as *Basilisk*, *Governor General*, *Magnet*, and *Magnificent*, and other bright scarlet flowering kinds, we may reasonably expect something good to begin with in the way of scarlets.

In the flower-garden, the most telling varieties will always be those with the brightest colours and most free from the dark brown spots and blotches; scarlets and whites, also white and scarlet in the same flower, then bright rose, deep pink, and any good shade of purple. This is on the supposition that bedding Hybrid Perpetuals would pay better than those for pots and the greenhouse. The style I mean is well represented in

many of the fancy Geraniums; but there are none among the fancy, as far as I know, which have a natural turn for perpetual blooming, as *Lady Mary Fox*, for instance; therefore, it would be the merest chance in the world to get a Hybrid Perpetual between fancies and florists' kinds.

Between 1836 and 1844 or 1845, we had several sports from the florists', which they and we have since all but banished from the gardens. The best known of these is *Priory Queen*, but all of them differed considerably from the general run, in flowering as freely in the autumn as they or any of the others did in May and June; but they rested between the first and second time of flowering, which the true Perpetuals, as *Unique*, never do; still they would make a valuable step in our attempts for a race of true Hybrid Perpetuals; and, depend upon it, we need all the assistance within our reach before we can make an *impression*, as it were, as all our true perpetual-flowering Geraniums are very unwilling to seed, if they are not absolutely barren.

If *Lady Mary Fox*, *Touchstone*, *Diadematum rubescens*, *Sidonia*, *Ignescens superba*, and *Unique*, would but seed half so freely as *Punch*, or *Tom Thumb*, I would undertake, myself, to clear the whole garden of the present race of that breed, and plant whole beds of such brilliant and varied flowers as would put your shows of the best fancies of the present day entirely in the shade.

By-the-by, allow me to remark, now that I think of it, that I have made a mistake, and a very serious one, some years since, and that others have since deepened the dye. At the present moment we have not a single plant of the true *Unique* breed in the kingdom but itself and the *Shrubland Pet*, after all. Our lilac, white, and scarlet *Uniques* are not *Uniques*, nor anything near it, but a slight resemblance in the mode of growth. They are all of them of the race of *Ignescens*, except the so-called *White Unique*, a name which was given by a pupil of mine, who left *Shrubland Park*, and sent me this one from Kent, by that name, avowedly as his own manufacture; but he found it at a cottage without a name. This has three parts of the old *Quercifolium* breed in it, and no more. A little pale pink flower called *Capitatum* is the great-great-grandmother of *Unique*, and *Shrubland Pet* is the only other plant in our gardens of the *Capitatum* breed. For the present, the breed breaks there, and there is no pushing of it any farther, that I am aware of.

There was no end to the breed of *Ignescens* thirty years ago. *Lady Mary Fox* is of that breed, and the best of it that ever I saw. It also is barren, or, at least, we do not possess the real male line with which it would breed.

If *Lady Mary Fox*, or *Unique*, and all such, were transported to Madeira for three years, they would be very likely to breed there, after that interval, as freely as if they were genuine species.

The race of *Diadematum* is also most difficult to seed; but I have effected one cross in it which will be a help to the breeder for Hybrid Perpetuals. I never knew one of that race which would not bloom from April to November, in-doors, at the beginning and end of the season, of course.

But why follow the subject into these difficulties? Why, indeed, but that I cannot otherwise see my way straight through to a new race of Hybrid Perpetual Geraniums. Such a race will be raised, that I am quite sure of; but if we do not break ground on a true scientific basis, depend upon it we shall be hampered at each step, and get into a circle again, and be no better off than the florists, who, however, have proved one great fact, which is, that in this order the Geranium tribe can be improved to the highest pitch of excellence by breeding in and in. Cross breeding may not do so

much in the same family in our times. Still, to have gay flowers all through the season would be a great triumph.

Hybrid Perpetual Roses wanted the true scent for a long while, but now they are getting them more scented, and in time they will be as sweet as the Cabbage Rose. We, in our turn, may want points at first, which are now in high esteem in Geraniums, but ultimately all the points will come out as true as I write about them.

We have now arrived at the very best time of the whole year for effecting difficult crosses in the Geranium family, which is done by a sudden check just before the flowers open, and that check we now give to all our bedders on turning them out into the beds, whether we cross them or not. Therefore, there is not a day to lose in these experiments.

If you have a particular Geranium which you would like to have seedlings from, begin on this wise—pick off all the open flowers, if it stood in the same house or pit with other Geraniums which might inoculate the flowers unknown to you; then remove it to a place by itself, turn it out of the pot, under a south wall, or some very hot place, and do not water it nearly so often as other plants, and keep the rain from it if you can. Dust the flowers as they open with their own pollen, and nine out of every ten seedlings from it will be as like the first plant as can be, and these are the best sort of plants to make pyramids with, as they make such a host of side-shoots—three or four times more than plants from cuttings would do.

The next step is to get a new sort, and that must be by using pollen from a different kind; then the cross will be, in most cases, half from the mother side and half from the father side, and that is how we mean to get Hybrid Perpetual Geraniums. We plant out perpetual-flowering ones, which are all difficult to seed, and which will only seed with us under a sudden check, if even then, and try and get a cross between them and the best of the greenhouse kinds; that is the best for our purpose, as I have already explained.

I have tried several ways of giving this sudden check to shy breeders; but none of them have been so effectual as this at first turning out at the beginning of the seasons.

When they have grown a little out-of-doors, or when they are growing vigorously in the greenhouse, it is next to impossible to seed them by any means that I know of. Sometimes you may possibly seed them by exposing them in the draught of air, on a front shelf, till the leaves droop two or three times, or by shaking them out of the soil, and repotting them in smaller pots in poor soil; but then the seed has no germ and cannot vegetate. This led me to believe that a dry, hot climate would so ripen and harden the wood; and where they would hardly rest at all in winter, that fertility might be restored that way; for the female organs seem perfectly developed and healthy, although we cannot fathom the reason why they fail to seed. There is some constitutional reason for their barrenness, rather than any impediment in the reproductive organs; but, whatever the cause, we must overcome it before we shall establish a race of perpetual bloomers, and the present month of June is the only time this season which appears to me to be favourable to these experiments. There are other opinions on the subject; but I am not acquainted with their results; and any one may take an opposite view from mine. There is room for all conjectures, and who ever succeeds will do service to the state of gardening.

D. BEATON.

VINES NOT FRUITFUL.

"A CONSTANT SUBSCRIBER would feel greatly obliged if you could give him some information concerning his Vines not fruiting under the following treatment. The house in question was set to work the 1st of February, 1855, with as small a fire as possible for the first few days, when I gradually raised the glass up to 40°, and from that to 45°, by which time the buds began swelling, and looked very promising, and I then raised the house from 45° to 50°, which was about the heat I kept them till they had fully put forth their buds, which they did, with constant syringing, very satisfactorily, as far as that went. The wood they are now making is very strong, short-jointed, and remarkably clean. Not an insect is upon them, that I am aware of, and they are more healthy than they ever were before. Of fruit, however, they showed none, save a few poor, weak bunches. At the time they ought to have come into bloom they wired, and went completely off. The house was then kept about 50° to 55° at night, and from 55° to 60° in the daytime, and, perhaps, a trifle more when the sun was upon it. The border was covered, a few days before the house was put to work, with a gentle fermenting material from the stable-door, which kept all frost out, and I thought would greatly help the Vines, as there always seemed a nice warmth in the border. The house is heated with flues, back and front. I forced the same house last year in January, and had a nice crop under the same treatment as above alluded to; being the first year I had the pleasure of so doing, as I did not enter the service of my employer until October, 1853. The house in question was set to work, I think, late in 1852; so in 1853, in February, it had set its fruit, I believe a good crop, when, through some neglect of the gardener, the frost was allowed to enter the house, and destroy the whole crop, cutting the Vines, of course, at the same time. They then made their second growth, and were again neglected, being allowed to grow the whole of the summer of 1853 without having one lateral or tendril stopped in any way; so that the house in question, when I entered into my present situation, in October, 1853, was a complete forest. But the house is improving, as far as strength goes, since I have been here to a very great extent. I have manured the border, and forked it over, and done all that I could to render it all the benefit I thought was necessary. I should feel greatly obliged if you can give me any reason for not having any fruit this year; or whether it is through any mismanagement of mine; if so, I beg to be corrected?"

I think it quite right to publish the enclosed letter in a prominent place. I do not see my way clearly to give a definite reply to the definite enquiry as to the cause of failure; but the subject may thus obtain general attention, and the opinions of others, backed by practice and experience, may tend to elucidate and remedy the evil, which has this season been frequently made a matter of complaint.

The chief difficulty that presents itself to a solution of the question, is the previous fruitfulness of the Vines, even when submitted to unfortunate or ill-directed management, taken in connection with the present health of the foliage and the short-jointedness of the wood. Had the foliage been extra large, and the wood long jointed, a solution would at once have been presented, in a suspected deep, rich, undrained border; in other words, a border better supplied with organic matter saturated with moisture, than with organic matter within reach of atmospheric influence. An intimate friend of my own lately stated, that if a Vine produced fine foliage, it was the gardener's fault if it did not yield a fine crop of fruit. Now, I have seen Vines with leaves like parasols, that frequently produced a few large bunches, and these not at all remarkable for their flavour; while, in many other cases, the bunches, neither in size nor number, bore any proportion to the magnitude and luxuriance of the foliage. In such circumstances, the curling up, in other words, the *tendrilling* of the incipient bunches is a common occurrence.

Contrary to all recognized rules respecting the continued battle that must ever be waged between extra

luxuriance on the one hand, and extra fruitfulness on the other, the idea has been gaining ground, that the Vine is such a rank feeder that it is impossible to make it too luxuriant. Grant that the roots are confined to a shallow, well-drained border, twenty to twenty-four inches in depth, with rubble below, and a drain at least two feet deeper in front, with cross drains, if the soil is naturally adhesive, then as much nourishment as such Vines can take in, without repletion, will not make them extra luxuriant; in other words, will not present an amount of growth which cannot be fully ripened and matured. But give the roots of Vines free pasturage in a border some three and a half feet deep, and let water remain among them in a stagnant state, then the seeming luxuriant wood will be so ill-matured, that if extra attention is not given to ripening, and peculiar modes of culture adopted, forcing to any extent is almost sure to be attended with a deficient crop, and shanked, shrivelled, and tendrilled bunches. Were it not for the firm, short-jointed wood, I should be led to suppose that the depth of the roots, and a want of sufficient drainage, were a chief cause of failure in the present instance.

I give utterance to this idea more particularly, because, after the severe check which these Vines received in 1853, there would, ere long, be a tendency in the roots to strike deeper, in order to obtain the resources to keep up the luxuriance of the second growth that was made; and although that growth seemed to have been neglected, one thing is evident, that the principal shoots had been well exposed to the agency of light, or there would not have been the good crop in 1854; and one other deduction may be drawn, namely, that order, regularity, and neatness, may riot in extremes, in clearing away too fully all spray in the shape of small shoots and laterals, and thus so far curtailing root action. The principle here involved, and its timely application have, however, previously received a fair amount of elucidation. It is perfectly possible that the crop in 1854, and the extra luxuriance *now*, may be the result of the mishap and the comparative neglect in 1853.

Perhaps, also, the *nice* crop in 1854 had been too heavy a one, and the Vine had been too severely exhausted of its fructifying powers, and having learned a bad lesson in 1853, might have a desire to repeat the experiment, and have a season of making up, as it were, in 1855. I have sometimes noticed, that on this exhausting principle, a plant allowed to produce too freely one year, produced little or nothing the next. A Vine, however, all right at the roots, will produce prodigious crops year after year continuously, even though the learned continue prophesying destruction and ruin. I do not mean to say that this would be the reason in the present instance, but it might operate as an auxiliary, if other circumstances were unfavourable.

Most gardeners would consider the temperature low enough. When nearing the flowering period, from 55° to 60° would be preferred at night, and from 60° to 70° during the day, with a rise of 5° to 10° for bright sunshine. In the case of *Muscats*, most people would like from 60° to 65°, and even more at night, and a proportionate rise during the day. I have set even *Muscats* very well indeed in an average temperature for several hours at night, from 55° to 60°; but most of our best gardeners prefer a few degrees more. I do not attribute the temperature used as any cause whatever of the disappointment, though I believe it to be one cause of the vigour of growth; and the freedom of the plants from insects. Were this low temperature at night still more in vogue, there would be less of sulphur and tobacco required in gardens. I am quite convinced that this tendrilling of bunches has often been produced from a different cause,—a too high a temperature,—and more especially when the border was not sufficiently protected to secure root action simultaneously with the

bursting of the buds, and the growing of the shoots. This, however, could not be the reason in our correspondent's case.

Perspicuously as our Subscriber has stated his case, there is one important part which he has wholly omitted, namely, *pruning*, and preparations made for pruning; a matter of no great importance in itself, but becoming of first-rate import when taken in connection with other circumstances. I have Vines—it matters little how I choose to prune them—long rod, short rod, spurred to a bud, or the shoots all cut close into the stem, and fresh bearing shoots allowed to come from the incipient latent, and, before they break, *invisible* buds. Under any or all of these modes, there is sure to be a great deal more fruit shown than it would be prudent to let half or even a fourth of it remain. I have other Vines, that were I to persevere, as I have sometimes tried, to cut or prune on the spurring or cutting close principle, I might call for bunches, and call again; but they would not come!

Some of these Vines, demanding such different treatment, are in the same house, and receive, as respects temperature, &c., exactly the same management; but those that I may cut and prune in almost any way, and not miss a crop, are planted near the surface, with a deep drain in front; and a little encouragement in the way of mulching, &c., tends to keep all the young rootlets, or at least a good share of them, near the surface. The others that will not stand this spurring system are older Vines, whose roots are much deeper. Many of these, from lifting the points of the main roots, and also from mulchings and protecting the borders in winter, have been induced to point their rootlets upwards; but on the whole, the main part of the roots are so deep, and liable to be extra moist, that instead of the elaborated fructifying juices being diffused, as in the above case, over the whole plant, it is stored up chiefly in the best-swelled and the best-ripened buds. Hence, Vines that were next to failures when pruned upon the spur principle, were fruitful enough when grown and pruned upon either the long rod or the short rod system. The youngest beginner may satisfy himself of the likelihood of this, by inspecting the buds upon a short bearing shoot or on a long rod. In either case, the buds near the base of the shoot will be found very small and puny in comparison with the buds farther on, which often increase in size as the shoot lengthens. Now, when you cut back such a shoot to a spur, you remove all the best swelled and matured buds at once. We have seen that this does not signify when the roots are all freed from stagnant water, and near the influence of the sun's rays; but when circumstances are the reverse, these fine swelled buds will be the ones to rely upon, and the modes of growth and pruning must be altered accordingly, if the Vines are to be retained and allowed to remain in their present circumstances.

Generally, in such circumstances, it will be advisable to adopt the successional rod system, leaving two or three rods to the length of the rafter, which, of course, will necessitate removing an old stem every season when the system is fully established. With the roots of Vines not in the most favourable circumstances, deep, and not over well drained, I have seen good crops produced by the rod system, more especially when the foliage on these rods when growing was exposed to all the light possible, and a drier and higher temperature was obtained in autumn by means of a little additional firing. I have tried, in such circumstances, to concentrate the fruit-producing matter at the base of the young shoots, by gradually, during the summer and autumn, disbudding the buds from the axils of the leaves, so as to leave one or two only at the base, and though this was attended with advantage, the results were not so satisfactory as

when the rod system was adopted. It will be at once apparent, that on the rod system, the chief thing, during summer, in which it will differ from the spurring-system, is attending to the side-shoots only so far as will be necessary for the fruit upon them, but directing the merely growing powers of the plant chiefly into the rods, removing all side-shoots gradually without fruit, so as not too greatly to check the roots; and also all side-shoots as soon as the fruit is cut, that all possible vigour, and all possible sunlight be obtained by the rods or shoots designed for fruiting the following year.

As illustrative of these Vines, I will mention two facts out of many. In a somewhat low, narrow-roofed Vinery, in which the Vines had been long planted, and roots, as might be supposed, had gone to a considerable depth, good crops were obtained every year upon the one rod, or what might be called the *Hoare* system of training and pruning; one shoot being trained from bottom to top this year, fruiting all the way up next year, one shoot taken up from the bottom, and all the others stopped, and the fruiting shoot, with all its side-shoots, cut away when the fruit was gathered; the shoot of this summer fruiting again the succeeding year. This Vinery came under the charge of a young gardener, a thorough systematizer, that is, one who allowed a system to control him, rather than being at the trouble to control and bend a system to circumstances. He looked upon spurring Vines as the very acme of Vine management, and seeing nice, strongish side-shoots, from which the fruit was not all removed, he resolved to spur them back, and in doing so, as there was not room for the stems, the young shoot carefully tended in the summer, was, like the others, cut back to a bud. Now for the result. Instead of some two hundred bunches, he did not get ten in the house. Not to be beaten, he tried it again, and carefully disbudded the shoots in summer, but though the success was greater, it was not at all satisfactory. The year following the rod system was again tried, and with perfect success. In another year, he fresh drained a portion of the border, undermined the roots, and elevated them within nine inches of the surface, and that part so operated upon, he could prune and cut the tops just as he liked, and the cutting off numbers of extra bunches was a more pleasant occupation than vainly sighing and grumbling on account of their absence.

The other case to which I would refer, is that of a greenhouse Vinery, the border of which had been made by a keen amateur, according to my own directions, as to bottoming, slope, depth, mulching, &c. The Vines were managed upon the spur system. For years they did admirably, but the bearing powers of the Vines began in time to fail, the bunches becoming fewer and smaller, though there was no decrease, quite the contrary, in the luxuriance of the growth. I was again consulted, and advised examining the front of the border at the end of autumn, and to try and raise the roots, for at least a part of their length, nearer the surface. This, however, was objected to as tiresome and disagreeable, and hints were breathed that even the most costly pavement at bottom would not have been objected to, at first, to prevent the roots getting down, though I well recollect that the cart loads of rough rubble that were got were looked upon with something like dread, even on the score of cartage alone. However, it is little use telling a man these reminiscences when he is a little in the dumps; so another course was recommended and acted upon. The vinery could scarcely be said to be forced. The border got a good covering in winter of litter, alike to keep it dry, when semi-thatched, and to encourage, by the warmth, roots to come near the surface. Next season, all the shoots that had fruit were stopped at the joint above, in the usual way, and those that had no fruit were stopped a little shorter. Two were selected

unstopped, one at the base, the other near the middle of the rafter. As these grew on the other unfruitful side-shoots were gradually removed. Nothing but these two shoots, thus together forming the length of the rafter, were left at the winter's pruning. A little more firing than usual was given in September, alike to ripen the fruit and harden and mature the wood; a similar plan has been pursued since, and there has been no lack of Grapes. When this amateur wishes to be thoroughly successful on the close, or spur system of pruning, my candid opinion is, that he must raise his Vine roots near the surface, or remove them and plant others, the roots of which shall be prevented going down, or encouraged, by heat and moisture, to keep near the surface.

I feel the more inclined to believe that the depth of the roots, and in a moist medium, has something to do with our Subscriber's disappointment, inasmuch, as when the Vines were neglected, and allowed to ramble at will, a powerful root-action would be demanded to supply such a large evaporating surface, and as, if the inside of the house was neglected, it is not likely the border would be attended to in the way of waterings, the roots would be inclined to go downwards in the search for moisture, and, like all downward roads, when once the habit is acquired, it will be found more easy to progress onwards, than to resolve upon, and follow out, a more upright and upward course.

If it be any satisfaction to our Subscriber, I would cheerfully add, that it does not appear that his practice and treatment have been at all at fault. From what I have stated, he will now be enabled to judge whether his circumstances are such, so far as the condition of his Vines is concerned, as to warrant him in hoping to gain a benefit by any slight change of practice, so as to suit these circumstances.

If I have not been able to meet his case, perhaps a more fortunate person may be induced to do so. I can, at least, fully sympathise with him, as at one time I was no stranger to the evil of which he complains, and had the pleasure, if pleasure it could be, to run the gauntlet of much merriment and sarcasm at my expense, because I had the temerity to recommend a palliative for the evil in one of the gardening newspapers. This palliative, which I found very successful, was, suspending a small weight to the end of the whirling bunch, averaging from the quarter-of-an-ounce to more than an ounce in weight, in proportion to the size of the bunch and the obstinacy of the case,—the weight as much as saying to the refractory bunch, "you shall keep down instead of mounting aloft there." In many cases, bunches as beautifully twisted round as a corkscrew, only the circles as closely packed together as the wire in a *Jack-in-the-box*, with which pawky boys delight to astonish and affright their affected or really nervous sisters of humanity, such bunches have been made to untwist with the weight attached to them, to set their fruit, and finally to make their appearance at the dessert; when bunches in every respect apparently similar, and left alone, assumed and retained the tendril shape. If any-one with late Vines should be so unfortunate as to have reason to try the experiment, he need not be at all particular about it. I used to collect a good handful or pocketful of small, rough stones, bits of potsherds, &c., whip a piece of mat-string round the stone, or whatever it was, and then fasten the other end of the string to the end of the bunch. In obstinate cases, when screwed very much, a second or a third weight would be clapped on. I did not succeed in every case, but as a general rule, if the bunch retained the traces of flower-buds, the scheme was generally successful.

I had long before applied the same treatment to Melons that were grown upon a trellis, and to Cucumbers I wished to grow as long and as straight as a gun-barrel; in each case fastening the one end of the

string to the blossom at the end of the fruit, and the other end to the weight.

I have, in each of these cases, as well as in that of the Vine, been frequently asked to explain the *rationale* of the operation, but I fear I could make no headway in doing so. I can only imagine that the strain upon such a part has a tendency to draw an extra amount of nourishment to that part, just as the muscles of the leg are very differently developed in a sedentary person and one continuously walking; or just as the strength and vigour of age are very different in the case of a man who merely uses his hands at the writing-desk, and another man who vigorously plies the sledge-hammer for years. Let it be borne in mind, that this mechanical scheme must only be considered a palliative in unfavourable circumstances. Years have elapsed since I have had a weight to a tendril bunch. The remedies applied, were sinking a deep drain in front of the border, and lifting the roots for a part of their length. I could not afford to go all the way, because I could not lose a crop. There was little or no more tendrilling of bunches, though the rodding, or short system was still necessary. The border was so placed, that it was possible to put a new one gradually on the top of the old one. In this were planted young Vines, which have gradually superseded the old ones, and these may be cut and pruned in any way desirable, as the roots being near the surface, there is no lack, but rather an excess, of fruitfulness. I should be glad to know if any of these remarks meet the case.

R. FISH.

PLANTS FOR BASKETS.

"VARIETY is pleasing," is an old adage, and, like many other old sayings, expresses a truth universally acknowledged. It is recorded, that the learned and polite Athenians had set times when they met together to hear and relate something new, or, in other words, in search of variety, to give a filip to greater enjoyment of life, and thereby increase the amount of innocent amusement. I have lately visited many gardens in search after such novelties, and have observed in many of them a variation in cultivating plants adopted with the most pleasing effect. I allude to the growing of plants of a drooping habit in baskets.

The greatest and most successful example of this variety in culture is in the Crystal Palace, at Sydenham. Thousands, and, I may say, tens of thousands, have seen and admired those elegant baskets suspended in the air, giving a most pleasing variety to even the grand architecture of that most splendid of all buildings ever erected by man. I am, I confess, rather proud of them, for I had the pleasure, and, I may venture to say, the honour, of furnishing the greater number of the plants in them. I am glad they have done well so long, and I was much gratified with Mr. Beaton's laudatory remarks on them, when he gave his excellent description of the visit of our gracious Queen and her imperial guests.

I saw the plants myself about a fortnight ago, and was pleased to observe that they are looking remarkably healthy, hanging down several feet below the baskets. This proves that they not only were planted in good soil, but that they have been duly attended to with water, all decaying branches pruned away, and every dead or yellow leaf nipped off.

The next best example of this mode of culture, I noticed in the hothouses belonging to G. C. Schwabe, Esq., of Handstyle House, near Liverpool. I have also seen good examples at Trentham and Knowesly Park.

Messrs. Arthur Henderson and Co., of Pine-Apple Place, amongst nurserymen, are adopting this method

to a considerable extent, and, no doubt, many others are doing the same. As this is, then, becoming a fashionable pursuit, that will, no doubt, increase, and being, besides, a pleasing variety, I think a few plain directions on the culture of Basket Plants will be desirable, and useful to the readers of *THE COTTAGE GARDENER*, many of whom may be inclined to adopt the practice when they know how to set about it.

In order to render my directions intelligible and more easy to be understood, I propose dividing the subject into the following heads:—1. A brief description of various kinds of baskets. 2. A list of plants suitable to plant or put into them. 3. Soil and planting. 4. Training. 5. Watering; and 6. General Management.

THE BASKETS.—These are, as may be expected, of various forms and materials, from the simple rustic wood basket to the more costly glass vase, and highly elaborately-finished wirework-basket. Of the latter kind are those in the Crystal Palace. They are large and circular, with a lesser half-round or semi-circular kind of globe below the main body of the basket. Inside of the larger part is a large circular pan, in which the soil is placed, and the plants put in it. The baskets are suspended with strong wire to the balustrades of the upper gallery. It is only for such a large building that such large baskets are necessary or fitting. For smaller conservatories they should be of smaller dimensions. At Knowesly Park they are made of wire also, but are only about a foot diameter. The drooping plant there is grown in a shallow, wide pot, placed inside the wire basket. The pot is soon concealed by the leaves of the plant. A very elegant basket is made of coloured glass, with a broad rim and oblong globe below, to contain the soil and the plant. Such may be seen at the Pine-Apple Nursery, in Edgeware Road, with plants in them. There are also baskets made of porcelain, which are very ornamental, and also of common earthenware, the same colour and material as the common garden-pot. These are cheap, last long with care, and the plants thrive well in them. The forms, of course, can be as various as may be desired. I have some of a half-globe shape that are neat, and answer well. Messrs. Henderson have had some made the shape of the common garden saucer or pan, with holes at the sides; and just under the rim, through the latter, the wires are run, and meet together about a foot above the rim, where they are twisted together, and by them suspended to the roof. The most rustic basket, however, is made with Hazel, Oak, or Maple rods, such as I have described for various Orchids to grow in, more especially the Stanhopeas. The objection to such baskets is that they soon decay; but then they are cheap, easily made, and easily renewed. Such will suit an amateur with limited means, or a poor cottager might easily make such at his leisure hours, and have his suspending plants in his window. Lastly, the most simple of all is the common garden-pot, with a square platform of wood under it fastened to the pot with wire, and the pot itself suspended by wires brought round the pot under the rim till they meet, and then brought upwards and twisted together. Such simple baskets, if they deserve that term, are what Mr. Schwabe grows his fine, suspended plants in his preparatory hothouses. They are, when full of foliage and flower, placed in handsome wire baskets, and suspended with brass chains in his elegant conservatory.

PLANTS SUITABLE TO SUSPEND IN BASKETS.—This part of my subject divides itself into two. Stove suspenders, and Greenhouse suspenders. I shall give the Stove ones first.

STOVE PLANTS.—*Æschynanthus Boschiatus* (Bosch's).—Handsome foliage and scarlet flowers. A free-grower and droops naturally.

Æschynanthus Lobbianus (Lobb's).—Dark foliage,

with crimson flowers, appearing in June. Droops naturally.

Æschynanthus pulcher major (The larger fair).—Very fine foliage, scarlet flowers, appearing in July. A free-growing naturally drooping species.

Agalmyla staminea (Long-stamined).—Foliage large; flowers long, scarlet tubes from the joints of the leaves, appearing in June. Very handsome.

Cereus flagelliformis (Rod-shaped).—The well-known Creeping Cereus; no foliage; the stems are covered with hooked spines; flowers rosy-pink, appearing in July. This is a decided drooper, and is, when in flower, very showy. It is almost hardy enough for the greenhouse, if kept dry through the winter. There are several varieties of Cereus, such as *Mallisonii*, for instance, that droop, and would answer well for baskets.

Ceropegia stapeliæformis (Stapelia-like).—Foliage only middling. Flowers curious, of a purple colour spotted with white. Droops naturally.

Cyanotis axillaris (Axillary).—Beautiful flowers, and pretty foliage. Requires training downwards at first, but droops naturally afterwards. Increased by seed, lasting only two years. It will thrive tolerably in a greenhouse, requiring peat soil.

Didymocarpus crinitus (Long-trained).—Fine, large foliage, and white and yellow flowers, like a Gloxinia. This is a handsome plant for a basket.

Epiphyllum truncatum (Abrupt-ended), with its varieties, *Russellianum* and *violaceum*, do exceedingly well in small baskets. Foliage broad and fleshy; flowers pink and violet colour, appearing in May and June. Require little water in winter, but abundance in summer when growing.

Hoya Bella (Beautiful).—Foliage small, flowers in clusters of a pleasing white and amethyst colour, droops, or rather bends, gracefully, and forms a dense mass.

Hoya carnosæ (Thick-leaved).—Foliage large, flowers in large drooping corymbs; they are of a pinkish-white colour, and contain, or rather yield, drops of pure sweet honey; hence this fine old plant is known as the Honey plant. Peculiarly well adapted for baskets, the large, heavy leaves weighing the branches downwards, and the flowers are seen to the greatest advantage when viewed from underneath. Many other species of *Hoya* might be put into baskets with good effect, especially *H. campanulata*.

Impatiens repens (Creeping).—Foliage small, but very numerous; flower large and of a bright yellow colour. This is a Balsam, but more perennial than any other. It is of a very drooping character, and, therefore, eminently fitted for baskets of any size.

Isolepis gracilis (Graceful).—This is a species of rush, with slender, drooping stems, eminently beautiful, though the flowers have no petals and are green. For a small glass vase nothing can be more graceful.

Russelia juncea (Rush-like).—Foliage small, almost like a Heath. Flowers very numerous, tubular, and scarlet in colour. A very handsome, drooping plant, seen now in cultivation. It is a very handsome plant for a large basket, requiring a rather large portion of rich soil to grow it well and flower it profusely.

I have selected the above plants as being well suited for this particular purpose, namely, of growing in baskets in stove-heat. Many others might be added, or any of the above changed for others in after years for the sake of variety. I have grown many species of *Achimenes* as suspenders, and very showy they were when in flower. The beautiful and richly-coloured leaved *Cissus discolor* would, I am persuaded, look charming in a basket; as also would the sweet-scented *Stephanotis floribunda*, and many other stove creepers. Many would flower more freely in baskets, by reason of their being exposed to a larger portion of light and being cramped at their root.

I offer these conjectural remarks on the extended number of species of plants that might be tried in baskets, in order to induce gardeners that have the means to try various plants for this purpose. I have purposely omitted Orchidaceous plants, because these require the moisture of the Orchid House and its greater heat; and besides, there are few persons that have the means of growing them.

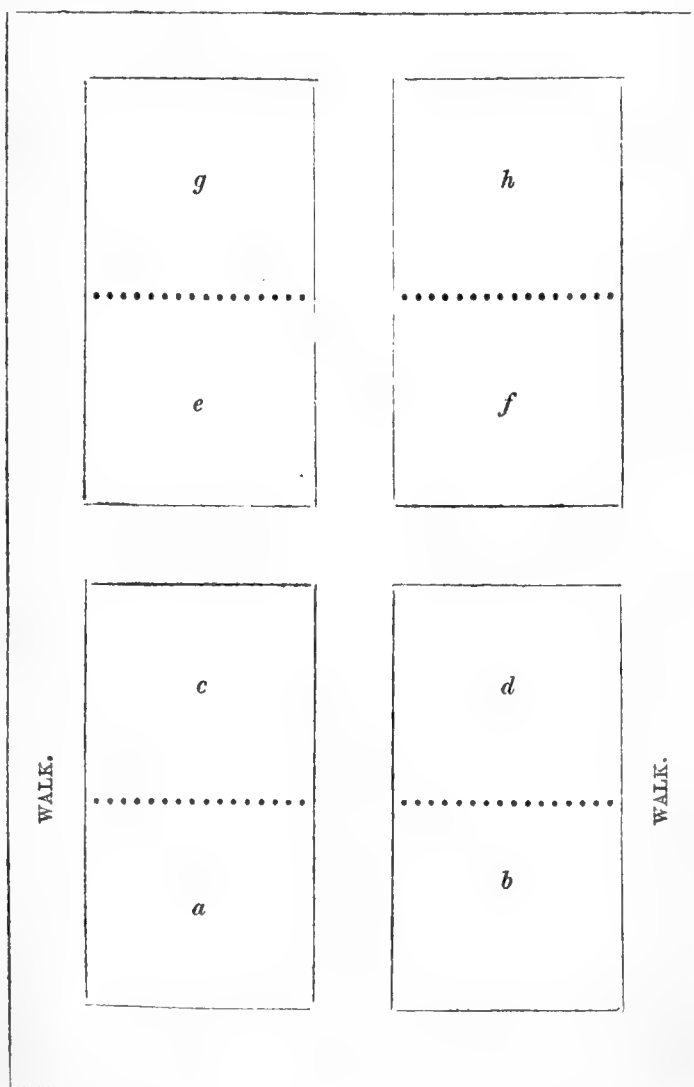
My next paper will contain a list of plants that may be grown in baskets in the greenhouse, and the window—some of which will, I think, be rather surprising to our readers.

T. APPLEBY.

(To be continued.)

GARDENING FOR THE MANY.—JUNE.

THE ungenial month of May has retarded vegetation very much, so that everything is unusually late; but though late, there are certain productions which may, probably, turn out better on that account than if they had been earlier; for instance, the blossoms of *Pears* and *Cherries* were not expanded until the season was so far advanced that they received a good sheltering from the leaves of the trees, while *Apples*, being still later, there has been less damage through spring frosts; in fact, notwithstanding the cold, dull weather, we have, on the whole, been visited with less frost than is usual in May, and it is possible for a week or two of genial weather in the early part of June to restore us to our proper position. On thing must not be forgotten,—the spring has been a dry one, so that the use of the watering-pot must be had recourse to; yet that must only be done when really wanted, which it is not in every case when we see it applied; but former articles will have explained this, so that we shall proceed to the details of our divisions in the kitchen-garden, &c., as given in the adjoining figure.



a.—This being all *Strawberries* will require much attention now, for if the weather proves dry they will require an abundant watering once or twice in the early part of the month; something must also be laid down to keep the fruit from the ground. Slates or tiles do best, but straw or short grass will do; if the latter, be careful not to introduce any ripened seed of weeds, or grass; the plants must also be looked over, and all useless runners cleared away, reserving only some of the best for any young plants that may be wanted. When the fruit begins to ripen, cover over with nets if birds trouble them, or adopt any other means likely to prevent their ravages.

b.—By the middle of the month this plot will be all under crop; the last row of *Cauliflower* having been planted; but the *Potatoes* will speedily be fit to take up for use; after which the ground must be dug, and, if necessary, some dung added, so as to be ready to receive another crop early next month.

c.—*Asparagus* must not be cut too severely; that is, it must not be cut late in the season, unless it be remarkably strong; but, as soon as cutting ceases, then begin to improve it by applications of liquid-manure and salt: the latter must not be used too liberally at first, but by-and-by it may be more so. Just before rain is the best time for both. *Sea-kale* requires but little attention, save only to prevent its producing an undue proportion of flower and seed; a little must be allowed. *Rhubarb* may be similarly treated; and, as it will now be superseded by *Gooseberries*, it ought to have some generous treatment, to enable it to gain strength for next autumn again.

d.—*Onions* will now want thinning, which do effectually, if you want good bulbs; hoe frequently, taking care to leave the ground without footmarks upon it; and if there be a vacant space on this plot, and *Celery* plants ready to plant out by the beginning of the month are to be had, a row may be so planted; drills a foot wide, and not more than a moderate spit deep will do, putting in some good, rotten dung, and taking care to plant them in dull weather, if possible.

e.—The last sowing of *Peas* may be about the middle of the month, and for that purpose an early white kind is best, as the *Early Kent* or *Charlton*. Stick the others as they advance, and clear away any that are past bearing, but this will hardly be this month. Keep the ground in good order, and next month *Brocoli* may be planted between the rows of those sown in May, so as, in fact, to occupy this division with this crop entirely as a winter one.

f.—A sowing of dwarf *Kidney Beans* may be made up to the middle of the month, and any damage done to the early sown may be made good at the same time, by planting from a few sown in some odd corner on purpose for such emergencies. Put stakes or poles to *Scarlet Runners* as they advance, and let good cultivation, in so far as regards the ground, pervade everywhere.

g.—The late spring has been an unfortunate one, in many instances, for *Carrots*, the long, dry weather and cold winds having injured them very much; but where they do exist thin in time, and give them every encouragement, as far as regards hoeing and stirring the ground, &c. Thin, also, *Turnips* as they advance, and sow more; the *American Strap* is a good Turnip. Another crop of *Broad Beans* may also be put in, and those up must be earthed up, &c., as recommended before.

h.—Thin out the *Turnips* as they advance, and sow more; dig and manure any ground that becomes vacant, and as the bulk of this plot will be so,

having been Winter *Brocoli*, and let the *Celery* trenches be at once made, and prepared for the plants, and on the top of the ridge plant *Lettuces*, which will come off in time to allow the earthing up of the *Celery*. Keep all in good order.

BORDERS.—Disbud the *Peach* and *Nectarine* trees, and thin the fruit where they want it. Sow *Lettuce* twice, at least, during the month, and a pinch of *Cauliflower* and *Cape Brocoli* about the middle of it, for the last time, for this year's use. Sow also *Endive* in the middle and towards the end of the month, and see to the beds of things already sown that they do not crowd each other. Prick out *Celery* to strengthen; and ridge *Cucumbers*, which were planted out last month, will still require some little assistance in the protection way. Sow a small bed of *Radishes* on a moist border, if you have one; if not, they will not be of any use. Examine all fruit-trees that *Insects* do not prevail, and let the whole have that order and neatness, without which nothing looks well.

FRAME.—If you have obtained a few plants of *Melon*, and a fresh dung-bed, you will have another beginning in the hotbed way, and will have a medium in which to propagate many useful window-plants by cuttings; but be sure do not let anything be admitted that is at all infested with disease or insect. Green fly may easily be killed by immersing in tobacco-water; but the other is not so easily eradicated, and if *Melons* become once affected they are no longer useful. A rather stiff soil is best for them; but as these directions are given elsewhere, it is needless here to say more; but if an odd corner could be spared here, where a slightly elevated bed could be made, it will be an excellent place to strike many hardy plants, as *Heartsease*, *Phloxes*, *Double Rockets*, *Wallflowers*, *Sweet Williams*, and a host of others, which strike very well without glass, or heat either, if they be put in at the right season, and in dull, moist weather. *Pinks* and *Carnations* require a little more care, and will hardly do without glass, yet they will sometimes do so. See the notices of such things in former numbers.

FLOWER-GARDEN AND ROCKERY.

If all was done last month that ought to have been done but little will be wanted this month in the shape of planting, except it be such annuals as have been raised elsewhere, which may now be planted here; but avoid crowding too much in a mixed border. Those who plant in what is called massing, may plant as thickly as they please, but it is not appropriate for a mixed border. Keep all plants neatly tied up that require it, but tie up none that will do without. Keep down all unruly growths and uncalled for suckers, and endeavour to keep *Roses* free from vermin, if possible. Propagate any favourite plant, cutting, or slip, and seeds of some Perennials may yet be sown, but it must be done early in the month; and keep all things in good order, the grass well mown, and the walks clean and smooth, and weeds eradicated everywhere, while all flowering plants past their beauty must be cleared away; for though there may be a wish to save seed of some plant or other, yet it is always unsightly when in that condition; and when there is a means of obtaining seed elsewhere, it seems a pity to allow anything unsightly to remain in a plot otherwise flourishing and orderly. More particulars bearing on this subject will be given during the month, which the state of things may call for as being more suitable.

J. ROBSON.

NOTES OF THE WEEK.

THE *Cuckoo* was heard in Sussex on the 23rd of April, and at Stowmarket, in Suffolk, on the 29th of that month. This is very little later than usual; for in Sussex, April the 14th is known as "First Cuckoo Day," but its note is rarely heard so soon in the year. In Suffolk, the Rev. Mr. Jenyns states April the 27th to be the average day of this bird's being heard. The earliest day of its appearance noticed by him was April the 21st, and the latest, May the 7th.

White, at Selborne, in Hampshire, places April 7th and 26th as the boundary days between which the Cuckoo's note is first heard; and Mr. Markwick, near Battle, in Sussex, gives these boundary days, April the 15th and May the 3rd.

"May-Day" and the blossom of the Hawthorn were usually concurrent in the times of our forefathers. Thus we are told, that in Suffolk it was a custom in most of the farmhouses, that any servant who could bring in a branch of the Hawthorn in full blossom on the First of May was entitled to a dish of cream for breakfast. To this custom the following jingle alludes—

"This is the day
And here is our May,
The finest ever seen;
It is fit for a queen.
So pray, mistress, give me the cream."

The custom, it has been justly observed, is now disused, not because the master is unwilling to give the reward, but because the servants are unable to find the flowers. This is an unmistakeable evidence that the season of spring is postponed to a later date. The Rev. Mr. Jenyns, however, states that between the years 1820 and 1831, he knew the Hawthorn in flower as early as April 19th, and the latest date of its blooming during that period was May 20th. We do not know the date of its blooming there this year, but at Winchester the first Hawthorn flower was opened on the 31st of May. In the time of White, the extreme dates of this event noticed by him at Selborne were April 20th and June 11th. In Sussex, Mr. Markwick places them as April 19th and May 26th.

The Anniversary Meeting of the *Geographical Society*, on the 28th of May, was, as usual, highly interesting. Sir Rodrick Murchison presided, and many were the tributes of praise justly paid to those around the table, who, by their geographical discoveries and researches, had aided in the promotion of commerce and increasing the pleasures and progress of civilization. Among these travellers were those who had traversed almost every zone of the earth. Mr. Anderson, the African traveller; Captain Kellett, Captain M'Clure, and Dr. Rae, so recently returned from the Arctic Circle; Colonel Rawlinson, the explorer and decipherer of the records of Nineveh; and Lieutenant Barton, the intrepid explorer of Medina, Mecca, and Hurrur, were among the assembled guests. Admiral Beechy is elected President for the current year.

Mr. Vivian, the Honorary Secretary of the Torbay

Horticultural Society, has invented a *self-registering Hygrometer*, whereby the extreme points of dryness and humidity in Orchid-houses and other structures during the twenty-four hours may be ascertained. It promises to be equally useful as a meteorological instrument.

Lord Portman has been elected *President of the Royal Agricultural Society*, and will enter upon 'the duties of this office after the Society's Meeting at Carlisle in July.

In answer to various enquiries relative to the articles advertised by Mr. Rogers, of the Clock-house, Chelsea, we can only say that the *Osage Orange* has been found quite hardy at the Horticultural Society's garden, at Chiswick; and as it forms an admirable hedge, it is worthy of a trial.

The same observation applies to the *Texian Grass*, described by Mr. Rogers as "useful and elegant;" and his new *Texian grain*, described as "most prolific, and growing in very poor soil." These are all worth trial, for they may prove valuable, and the cost of the experiment is trifling.

THE SPOILED CHILD.

By the Authoress of "My Flowers."

THE following narrative is from the instructive pen of the kind contributor to our pages, who has so frequently placed before us profitable lessons, as well as interesting sketches of character. The one which is now offered to our notice is decidedly the most appalling of all. It utters, in tones of thunder, the solemn warnings it conveys. It turns from parents to children with loud and bitter cries. Oh! that all would hear and understand! Oh! that parents would bring up children for heaven and not for earth! Oh! that children would consider the awful lesson before them, and "flee youthful lusts that war against the soul;" yea, and that hurry it into perdition, without resistance, and without hope!

"The heart of him who can pass through the quiet churchyard of a rural district without meditating deeply upon the shortness and uncertainty of life, must, indeed, be more than ordinarily callous. Whose were the hands that planted these ancient Yews, that have witnessed the birth and death of so many generations? Whose were the minds that suggested, and the hands that carried out, those architectural beauties, which so often fill with wonder and pleasure the heart of the passer-by, and teach him that, with all our boasted advance in arts and sciences, we are but little able to cope with the mental designs and manual productions of these early architects? Above all,—whose are the graves which we see scattered around, whose headstones have long crumbled under the hand of unrelenting time? Do they contain bodies destined to join the band of happy believers in the first resurrection? or the mouldering bones of the wretched individuals, who, having lived in carelessness about the great concern of their souls, will have no part nor lot with the happy beings who have obtained forgiveness of their sins through the blood of the Redeemer? These are obvious thoughts that arise in the heart of every Christian man when passing through a village churchyard.

"It was on a similar occasion, only a few days ago, that my attention was painfully called to the grave of one who has now passed away some years from time to eternity, a brief sketch of whose melancholy life I purpose to give in your pages; and if it be the means of arresting the attention of any too-fond parents, or of recalling to the path of duty any headstrong son, I shall, indeed, rejoice in the result.

"In a village, some miles from a manufacturing town, resided a Mr. and Mrs. Campbell. The former held a large farm under a gentleman, whom he had formerly served as a kind of land agent, and in which capacity he

contrived to save a considerable sum of money, hoping, doubtlessly, to leave it to his only son, a young man (at the the time I date the commencement of my story) at about nineteen years of age. This only child! alas! like too many *only-children*, was spoiled by both father and mother; and was taught to look upon gold as the one thing needful, superior to all other possessions, temporal or spiritual. Poor George Campbell, as might be expected from the manner of his bringing up (no check being placed upon the gratification of any wish), became a violent, headstrong, ambitious young man; ambitious, I mean, of wealth alone, careless of the good opinion of his friends, and brutish to his unhappy parents, to whose injudicious training, if such a word as *training* may be allowed in such a case, his progress in everything bad might be indeed attributed. The father had brought him up as a surveyor, to which profession, on his reaching manhood, and becoming unshackled from his apprenticeship, he added the lucrative business of an auctioneer. In the latter department he had an extensive connection, and for a while he seemed destined to distance his competitors; but it soon became known that his habits were unsatisfactory, that he was fond of card-playing, and of laying wagers in sums that were considered as verging on imprudence, even among those that were not very scrupulous in such matters.

"It happened at this early period of life, when not more than twenty-three or twenty-four years of age, that, owing to some peculiar results of an executorship, his father became guardian to a young lady, left at a very early age without parents, and on reaching her twenty-first year becoming the possessor of a very large property. Here, then, was a chance for young Campbell! Could he but induce this young lady to become his wife, his fortune would at once be made! She was, also, accomplished, possessed of considerable personal attractions, amiable, and lady-like. Unfortunately for the pretensions of the ambitious father and son, the latter was most unprepossessing in his person and manners; tall and stalwart, his countenance bore a ferocious expression, which was not subdued by his face being deeply marked from an accidental blow or fall; but still the position which his father held went far to counterbalance many of these disadvantages, nor did he hesitate to make use of this position in forwarding the suit of his son. The young lady was for a long time inexorable. Deaf to all entreaties, she resisted with extreme pertinacity the advances of the aspirant; but at length she became wearied with incessant opposition, and in an evil hour consented to become his wife! From the moment of her marriage her happiness was gone!"

If there is, in woman's life, one step more madly absurd, as well as sinful, than another, it is taken when she suffers herself to be *teazed* into matrimony; when she takes the man to whom she is averse, or indifferent, "to get rid of him," as the customary phrase is. Alas! alas! Rid of him she certainly becomes, in one sense of the word: she gets rid of the attentions, the devotedness, the submission of the *lover*; but the *man*, with all his disagreeables, is united to her for ever. Tempers, tastes, manners, follies, or evil habits, all are made over to her for life, divested of the only charm that, perhaps, was the *secret* cause of their success,—the laying them all down at her own feet.

Mrs. George Campbell will be a warning to all who are thus seeking to get rid of a lover; and her husband will be a yet more terrible picture of parental indulgence, and the misery entailed upon a child by mistaken affection. The truest love is displayed by early correction and powerful restraints. How many a grown up, and even aged person has expressed thanks and gratitude for the severe but wholesome discipline of their firm and watchful parents, and grieved over the milder system adopted in the present day! The Word of God should be our direction in all things. If we went "to the law and the testimony" for guidance, as well as for support and comfort, we should rejoice more frequently than mourn and weep. Our lamentations are too often caused by sufferings arising from our own misdoings; from doing our own ways instead of walking by the Lord's rules, by gratifying our own tastes and affections instead of obeying His commands. And this is the reason why worldly people are overwhelmed in the deep waters, and why even true believers feel like Pharaoh's

chariots, when the Lord took off their wheels "so that they drive heavily." Let us, in all that we see and hear and read, mark how essential a thing it is to make the Word of God our day-book; how essential a thing it is to do as He bids us, whether pleasant or not to the flesh; for we may depend upon it, when we go forward in our own strength, and according to our own leanings, we shall, at the end, reap the bitter fruits that grow on nature's tree.

(To be continued.)

ALLOTMENT FARMING.—JUNE

At this season of the year we may expect colonies of *Insects* to make their appearance. Whether insects are the cause or effect of disease is still problematical; one party contending that a plant becomes unhealthy in consequence of the presence of insects that feed upon its juices, prevent the elaboration of sap in the leaves, and obstruct the admission of air; the other party believing, that as soon as a plant becomes unhealthy, either from improper management, or from unfavourable atmospheric influence, that then, and not till then, it is attacked by insects. That insects are the effect of an unhealthy state of the plant, can be proved by many facts. The Turnip crops were every season injured, and many seasons they had been entirely destroyed by the Turnip-fly. What do we now hear from the farmers on the subject? That when guano and other stimulating manures are used, the plants grow so quickly and luxuriantly that they grow out of the reach of the fly; in other words, they grow so rapidly as to bid defiance to the fly. To what are we to attribute the green fly, red spider, mealy bug, and all other insects to be seen on trees, plants, and vegetables, but to an unhealthy state of vegetation? The atmospheric influences, and the qualities of soil, are so great and so various, that it requires more knowledge and skill than falls to the lot of many to combine them in the proportions necessary for the regular progress of healthy vegetation. This remark is to be confined more to the cultivation of fruit-trees, plants, and vegetables under glass, than in the open ground. In the former case, clever gardeners are known, by superior management, to grow fruits and flowers without trouble from insects. In the latter case, the atmospheric influences are more beyond their control, and, therefore, vegetation is more injured by the attacks of insects.

When we consider that butterflies, moths, beetles, weevils, bugs, cuckoo-spit-insects, gall-insects, in short, the greater proportion of all insects, deposit their eggs on the leaves of plants, and that each different tribe chooses its favourite sort of fruit, or fruit-tree, plant, or vegetable, we must admit that the economy of Nature is wonderful, and although we may not be able to comprehend the wise ordinations of Providence, we should, nevertheless, believe that they were created for useful purposes. Strange it were, if in so vast and complicated a system as Nature presents, objects which to us seem useless or hurtful should not occasionally present themselves as difficulties not easily understood by beings whose views are so narrow and limited as ours.

In proportion as the knowledge of Nature has increased among men these difficulties have diminished, satisfactory accounts have been given of many perplexing appearances, useful purposes have been found to be promoted by objects which were at first thought useless or injurious. Amongst the many recipes for the destruction of insects are included tobacco-water, tobacco-dust, or snuff, soap-suds, gas-water, and dipping the points of the branches, or other points affected, in a puddle of clay, which, no doubt, in many cases, are very efficacious; but the carbonate of ammonia (smelling salts) in the proportion of half-an-ounce to a quart of water, ejected from a fine-rosed watering-pot or syringe, will be the most effectual, under all circumstances, for the destruction of insects.

As the early potatoes are used, the ground should be cropped in showery weather with *Winter Greens*, and a portion sown down with *Turnips*.

ENDIVE.—A small sowing may be made about the middle of the month, and when the plants are a few inches high,

about one-third of the tops of the leaves may be cut away, which will cause the hearts to develop themselves, and to bear transplanting better.

THE LEEK is a very useful vegetable and a delicious dish in the cottagers' family when well stewed and eaten like Sea-kale. To grow Leeks large, it will be necessary to transplant them about the end of the month, or when they are six or eight inches high; the long, weak tops of the leaves and the root fibres are to be trimmed before planting them in hollow drills, one foot apart, and from six to eight inches in the row, and to earth-up, as in Celery culture, which produces very large, white, succulent stems.

SWEDISH TURNIPS are both nutritious and very palatable when well boiled, and may be transplanted with safety in showery weather, to fill up any blanks in the allotment ground.

CABBAGES.—A small bed of any dwarf and compact sorts may now be sown for early Coleworts.

COOKERY.—As the superiority of our vivacious friends and allies, the French, over our own soldiers, in the facility with which they adapt themselves to altered circumstances, in availing themselves of the herbs and natural productions of the Crimea, to produce both savory dishes and nutritious food, has been attested by many correspondents from the seat of war, it is incumbent upon the cottagers of the United Kingdom, whence the raw material for an army is produced, to acquire a more particular knowledge of the art of cookery, and the useful properties of many herbs and vegetables that are but slightly if at all known by them. How very little is known in this country of the sorts of *Sorrel* that are used very generally by the French and Dutch in soups, sauces, and salads. Also, the Herb—*Patience*, that will produce several cuttings in a season, and continue in a healthy, productive state for many years; it is now very much neglected on account of the proper mode of using it not being generally known. Many other good and useful things are neglected for similar reasons. If M. Soyer's *Cookery Book for the Million* were more generally circulated, it would achieve a vast improvement in the application of culinary art to the preparation of diet for the inmates of cottages.

COMPOST.—Now is the season, when vegetation is making rapid and rank growth, to collect all weeds, decaying leaves, Cabbage stalks, grass, and road-parings for the compost or rubbish-heap.

VINES trained against the cottage walls must now be looked over carefully, and all weak and superfluous branches removed; the general fault committed in the management of many fruit-bearing trees is to allow too much wood to remain, which not only prevents the fruit of the current year from receiving the greatest nourishment, but prevents the sun and air from having free access to mature the wood and buds for the next season.

LETTUCE.—A little seed should now be sown for a successional produce of this most agreeable salad.

PINKS can now be struck in any shady border, spreading about three inches thick of equal proportions of any light garden soil, leaf-mould and sand. When the lower part of the cutting is stripped of its foliage, and cut to a joint, and the soil well soaked with water, it is gently pressed between the finger and thumb into the soil; when the air is more effectually excluded it will strike more certainly than when a dibble is used.

The same method is recommended for the increase of *Heartsease* by cuttings.

AS HAYMAKING is an operation frequently spoiled in many rural districts, we trust that a short account of the manner in which it is carried on in Middlesex, a county celebrated for good hay, will be acceptable to the readers of allotment farming. In the first day's process, all the grass mown before nine o'clock is tedded, or spread out, great care being taken to shake it so as to free it from lumps, and to strew it evenly over the whole surface of the ground. It is soon afterwards turned with an equal degree of care and attention; and if the number of hands be sufficient, they turn the whole again, or at least as much of it as they can before twelve or one o'clock. It is then raked into what are called single windrows; or so that each person may form a row at about three feet distance; and the last operation of the day is to put it up into grass cocks. The business of the suc-

ceeding day commences by tedding all the grass that was mown the first day after nine o'clock, and all that was mown this day before that hour. The grass cocks are then well shaken into what are called staddles, which are separate plots of five or six yards in breadth. Where the crop is so thin and light as to leave the spaces between the staddles rather large, they are immediately raked clean, and the rakings mixed with the other hay, in order to its all drying, so as to be of an uniform colour. The staddles are next turned, and after that the grass that was tedded in the first part of the morning once or twice, in the same manner as described in the first day. This business should all be performed before twelve or one o'clock, that the whole may lie drying while the people are at dinner. After this, the first thing is to rake the staddles into double windrows, which is done by every two persons raking the hay in opposite directions, or towards each other, forming a row between them of double the size of the windrows, each being about six or eight feet distant from the other. They afterwards rake the grass into single windrows, then put the double windrows into bastard cocks; and conclude by putting the single windrows into grass cocks. The labour of the third day is begun by first tedding and spreading out the grass mown and not spread the preceding day, as well as that mown in the early part of this day; and then the grass cocks are thrown out into staddles as before, and the bastard-cocks into staddles of less extent. These narrow staddles, though last spread out, are first turned, then those which were in grass cocks; and, lastly, the grass is turned once or twice before twelve or one o'clock. When the weather has been sunny and fine, the hay which was last night in bastard cocks, will this afternoon be in a proper state to be carried, as in fine seasons it may mostly be performed on the third day, but when the weather has been cool and cloudy no part will be probably fit to carry. In that case, the first business after dinner is to rake that which was in grass cocks last night into double windrows, then the grass which was this morning spread from the swathes into single windrows. After this, the hay which was in bastard cocks last night is made up into full sized cocks, and care taken to rake up the hay clean, and also to put the rakings on the top of each cock. And, lastly, the double windrows are put up into bastard cocks, and the single ones into grass cocks, as in the preceding days. On the fourth day the great cocks just described are mostly carried before dinner. The other operations are similar to those of the former days, and proceed in the same order, continuing them daily untill the whole is finished.—W. KEANE.

ON HORNETS.

THE Hornet is a noble insect, armed with a formidable sting, and deservedly standing at the head of the numerous family of wasps. We read of this insect being employed by the Almighty in the extermination of the Canaanites,* but its sting was, perhaps, more dangerous in those countries; or, what is more probable, the insect was purposely rendered more destructive to execute the Divine vengeance on those idolatrous nations. The dread of the hornet's sting is great with us; but, like many other popular notions, it is much exaggerated. This fear, however, has led most country people to look upon a colony of hornets as fit only to be smothered and exterminated, but a curious observer, with a little courage, may find in their habits much to interest him, and excite his admiration. I cannot help thinking that if the ancients had carefully observed the nests of those insects, the manufacture of paper would have been invented much earlier, for the nests of hornets and other wasps are, in reality, made of paper, which they manufacture as they proceed in their constructions.

The hornet, like the common ground wasp, prefers for this purpose the fibres of decayed wood. These insects carry this material in their mouths in small balls of about the size of peas. On this account their nests are not of so firm a texture as those of the tree Wasps, which form their nests of the fibres of sound wood. I am not of opinion

that these insects collect gum wherewith to mix up their materials, for the pellets, when taken from their mandibles, readily crumble to dust, but they appear to produce something like saliva, with which they masticate the material as they proceed with their work.

A colony of hornets, like one of wasps, is composed of queens, drones, and workers. These last are females, bred in smaller cells, and of imperfect growth. The same holds good of hive and wild bees, but hornets and wasps differ from both in one respect—that they lay up no store; still they follow the same practice as the wild bees—deserting their nests at the end of the season, after accomplishing their mission by rearing a number of queens, some of whom survive the winter, to begin fresh colonies in the spring.

During the past season, I set up a Polish bee-hive, six feet high. It was divided into two stories in the middle, glazed at the back, and with a door fitting over the glass, removable at pleasure, to allow inspection and observation through the glass. Small openings for entrance and exit were made at the middle of the upper story, and at the bottom of the lower one. The door was merely a slab sawed down the length of the tree, so that when it was shut the whole hive looked exactly like the trunk of a Fir-tree divested of its branches. It had been up only three days, and I had not begun to stock it with bees, when I observed the nucleus of a hornet's nest on the ceiling of the upper story. The solitary queen hornet soon made her appearance. A few days afterwards, I placed a swarm of bees in the lower story, and was prepared to give up the hive to whichever colony should prevail over the other, not doubting that the hornets would exterminate their neighbours in the lower division. In this, however, I was mistaken, for both parties went on in perfect agreement during the season, with the exception of two instances, the only occasions when I observed any hostility between them. One of these was when a bee happened to enter at the hornet's door, when the sentinel immediately cut it in two; and the other occurred in consequence of a hornet getting in amongst the bees. A scuffle at once began, and though a few bees only attacked the hornet, he soon lay dead at the bottom of the hive.

To speak now of the habits of the *Vespa Crabro*, or hornet, which I had full opportunities of observing as the colony proceeded in the upper part of the hive. The solitary queen began her nest about the 5th of June. At first it appeared like the head of a small nail driven half-way into the ceiling of the hive. The part resembling a nail-head was the nucleus of three cells, and as it advanced it had the appearance of a small parasol. On the 11th an egg was laid in each of the cells. I often observed the queen, as if fast asleep, coiled round the peg, or support of the nest at top, and laying quite at her ease on the covering outside. The cells were gradually lengthened, and more cells added round them. The eggs first laid were hatched in about three days, and the grubs were fed with great care by the mother till the 28th, when they began to spin their cocoons, or rather to close up the mouths of their cells. At that time the covering of the nest excluded them from my observation, and prevented my ascertaining the exact time of their containing in the *pupa* state. In eight days, however, workers appeared, and the queen ceased to leave the colony. I cannot exactly state what kind of food was given to the grubs, but it appeared to be some sweet fluid, and I know that they are fond of sugar and water.

I may here repeat a former observation, that queen hornets are shy and timid before their eggs are hatched, and when disturbed will skulk outside, but after that process is effected they show a bold front. This is, of course, in accordance with the instinct of all animals who rear their own young, and even of insects. And this would seem to account for the sting, at least, in hornets and wasps, for they have no store to defend, nor could their cells hold any, as they open downwards. I can state with confidence, that neither wasps nor hornets ever attack when at a distance from their brood, however provoked. I well know what pests they are in gardens, but I speak now of their habits as insects ruled by the law of their nature. They pursue and catch flies like swallows, and have been seen to drag them up out of a bottle of sweet liquid set to catch both, into

* Exodus xxiii. 28. Deut. vii. 20.

which both wasp and fly had fallen together. Being in the habit of flying late in the evening, they imitate bats in pursuit of moths. In warm nights they may be seen returning laden, even at midnight. The hive, or rather *vespiary*, I had contrived, afforded me good opportunities of making these observations, as also of noticing the excremental fluid of these insects, which is so copious that I was obliged to provide for its escape through the floor of the hive. The frequency of this discharge accounts for there being so large an opening in the under part of the shell of the hornet's nest, very different from the small aperture in the nest of the wasp, and particularly of the tree wasp.

The construction of the covering is, perhaps, the most curious part of the hornet's ingenious labour, and is begun as already described. To make room, however, as the combs increase, the inside shell is often cut away, and the material worked up again, to form a larger one. But as the season draws towards a close the reverse takes place. Coatings are formed inside to protect the smaller combs below, with many curious windings and openings, which it is impossible to describe. These coverings vary in colour, according to the wood of which they are made, and exhibit strata of different shades of colour, like rocks. The combs beneath this warm protection are formed under the other, about a quarter-of-an-inch apart, and are supported by many pillars composed of tougher materials than the cells. The top of each comb becomes the floor for the one above it. The cells are hexagonal in shape, and the workers, erroneously called neuters, are bred in the combs first formed, while the combs made later are exclusively occupied with the larvæ of queens and drones. Though both are bred in cells of the same size, the queens are larger than the drones, owing to the greater length of their cocoons, or closings of the mouths of the cells by grubs, before they change to the *pupa* state. The drones are easily known by their long, dark, and curved horns, and, like males of all the bee tribes, are without stings, and take no active part in the colony. Their sole function is to impregnate the queens before they leave the nest at the end of the season. The workers are smaller than the drones, and are the real supporters of the whole colony.

The food of hornets is similar to that of wasps, but they are not nearly so destructive in gardens; deriving their food chiefly, it would appear, from the forest. I have known them to eat off the bark of Ash shoots of considerable thickness, probably for the sake of feeding on the juice of the inner rind. Nothing, however, comes amiss to them, from the hard Pear to the blue bottle fly, which latter they will carry home in their mouths to feed those in the nest. I have stated that the drops of clear, tasteless fluid, which hornets carry in their mouths, is nourishment for the grubs, but it may be also drink for the insects. As hornets devour flies, it may seem strange that flies will venture near their nests, and even enter them to deposit their eggs in the filth underneath; yet it is true. A still more curious fact may be stated with regard to wasps, who equally wage war upon flies, which is, that a kind of fly is actually bred in their cells, the name of which I do not remember, but they might be called Wasp cuckoos, as the insects lay their eggs in wasps' nests, and so leave the brood to their care.

Though the name of hornet is known to every one, the insect is found only in parts of the country, and never seen in Scotland. Though the hornets appear later in the spring than wasps, they are more hardy, and do not leave their nests till the end of October. Wasps generally break up in September; during which month the queens gradually quit their nests for winter's quarters. Hornets do the same a month later, leaving the workers to attend to the younger brood; and these, true to their trust, will not leave the nest till benumbed with cold. The drones leave previously with the queens, but these having fulfilled their mission, and having no instinct to provide for winter's quarters, soon perish.

It will not be inferred from these observations that the writer has any wish to encourage wasps and hornets, since a knowledge of their habits will assist us materially in devising means for their destruction. A good apiarian knows the temper of his bees by their sound; and the same may be said with regard to hornets. The state of the weather seems

to affect their temper. When it is windy, or hot, the sound they make is angry, but even then they will never attack a person without due notice and buzzing about him. In calm weather they may be observed as closely as bees, and with equal safety. Like bees, too, in hot weather, hornets fan with their wings at the doorways of the nests, making rather a pleasing sound, which seems to proceed from small holes under their wings, and which varies with the movement. This is the observation of a German writer respecting bees, which are dumb, except when they emit a slight squeaking sound, if deprived of their wings. Hornets, like bees, have a great dislike to strangers intruding into their nests. During the past season, I put both strange queens and working hornets into their nest; but they were quickly destroyed. Mr. Knight justly observes, that it is those only who issue from the wasp's nest that attack one; and the same applies to hornets, as those returning are heavy laden, and their object is to get home and deposit their burthens. Both, however, are great plagues to man; and every means should be employed to reduce their numbers by killing the queens in spring, and destroying their nests in summer.

There are various plans, such as stifling them with gunpowder, &c., but the most simple one, especially with wasps, is merely to pour about a wine glassful of turpentine into the hole of the nest in the evening, and close it up with a bit of turf. I think that Professor Henslow was the first to recommend this. But if a price were set upon the head of each queen in spring—say a penny—as practised by some noblemen and gentlemen, such as the generous Earl of Traquari, who gives a penny for every queen wasp brought to his gardener, it would materially thin their numbers, and not only afford amusement to children, but add a little to their treasured-up store. If all who have a wish to preserve their fruit were to adopt his Lordship's plan, those destructive insects would be few indeed.—J. WIGHTON, *Cossey Hall Gardens*.

NEW PLANTS.

DRIMYS WINTERI (*Winter's Bark*).



ALTHOUGH a plant known in this country for nearly three centuries, the *Drimys Winteri* has never before been portrayed here from a living plant.

It was brought to this country from the Straits of Magellan, by Captain Winter, who accompanied Sir Francis Drake in his voyage round the world, in 1578. He had found its bark very serviceable to his crew as a spice eaten with their food, in the cold southern latitudes, as well as a

preventive of the scurvy. Clusius, in honour of the captain, called it *Cortex Winteranus* (Winter's Bark). Linnæus erroneously confounded it with White Canella bark, and united the two under the name of *Laurus Winterana*. Forster first named it *Drimys*, from a Greek word signifying pungency; but he afterwards changed the name to *Wintera aromatica*: but Decandolle restored the name *Drimys*, and it is to be found under that name in modern botanical works.

Sir W. Hooker says:—

"It has a most extensive range in its native country, South America; for, as we ventured to suggest, in the 'Botanical Miscellany,' that *Drimys Chilensis* must merge into *D. Winteri*, so Dr. Hooker has come to the conclusion that the *D. Granatensis* and *D. Mexicana* (and our own examination of specimens confirms this view) are also specifically identical, and that there is only one species in all South America. Thus this plant extends from Tierra del Fuego and Hermite Island, in the extreme south (there even ascending to 1000 feet of elevation), all along the west or Pacific side of the vast continent of South America, to New Granada, and even Mexico. Of course, as may be expected, there are many trifling variations throughout such a vast extent of territory, but no more than may be looked for under such circumstances. A distinct species of *Drimys* is found in New Zealand (*D. axillaris*, Forst.), and another has been recently found on the mountains of Borneo (*D. piperata*, Hook. fil.). All are pungent, aromatic, astringent, and anti-scorbutic. Our plant flowers in June, and is treated as a hardy greenhouse plant."—(*Botanical Magazine*, t. 4800.)

CALYCANTHUS OCCIDENTALIS (*Western Calycanthus*).

This beautiful hardy plant has not received the attention it deserves. It was introduced by Mr. David Douglas, from California, in 1831. A wall favours its flowering. Its blossoms are large, and dull crimson coloured. The wood is fragrant.—(*Ibid.* t. 4008.)

MYRTUS BULLATA (*Blistered-leaved Myrtle*).

This has been known as long since as Captain Cook's voyage, when he was accompanied by Banks and Solander as Naturalists; but it was not successfully cultivated here until recently. At Kew it is kept in the Greenhouse, blooming there in June and July; but in Devon, Cornwall, some part of the Isle of Wight, and in the Channel Islands, probably it will prove capable of open ground culture. It is a native of the Northern Islands of New Zealand, where it attains the height of from fifteen to twenty feet. With us it will be of a much lower growth. Its flowers are white, but rosy at the tips of the petals.—(*Ibid.* t. 4809.)

CEANOTHUS LOBBIANUS (*Mr. Lobb's Ceanothus*).

Another hardy blue-flowered Ceanothus from California. It was found there by Mr. W. Lobb, and sent by him to Messrs. Veitch, of Exeter and the Chelsea Nurseries. It blooms in June and July, and well deserves a place in the flower-garden.—(*Ibid.* t. 4810, but numbered 4811 by mistake.)

BOUGAINVILLEA SPECTABILIS (*Showy Bougainvillea*).

Although this most showy plant bloomed for ten years successively in a stove of the Jardin des Plantes at Paris, and at Chatsworth during 1844, for the first time in England; and although in the June of 1854 it bloomed in a Vinery, belonging to Mrs. West, at Christchurch, Hants, yet few have been so fortunate as to see it. The Vinery is really only a Greenhouse, for the grapes are ripened without fire-heat. It is there trained in a fan form against the back wall. The brilliancy of the plant arises from its bright rosy bracts or flower leaves, and they are so numerous that "the tree seems on fire with them." The plant at Mrs. West's is five years old, and the roots cramped in a comparatively small pot.—(*Ibid.* t. 4811, but numbered erroneously 4810.)

ESCHSCHOLTZIA TENUIFOLIA (*Slender-leaved Eschscholtzia*).

This was discovered by Mr. David Douglas, in California,

during the year 1832; and first described by Mr. Bentham, in the Horticultural Society's Transactions. New Series, i., 408. *E. caespitosa* and *E. hypecoides* are described on the same page, and there is some difficulty in deciding that the three are not variations of one species. They have all pale yellow flowers, and slender, finely-divided leaves.—(*Ibid.* t. 4812.)

WHITLAVIA GRANDIFLORA (*Large-flowered Whittlavia*).

This hardy annual is a great acquisition. Its deep blue bell-flowers are very striking. It was first discovered in California by Dr. Coulter, but seeds first reached this country from Mr. W. Lobb, who sent them to his employers, Messrs. Veitch. They exhibited blooming specimens at Chiswick in the summer of 1854. It was first described by Dr. Harvey, in the London Journal of Botany, v. 312, and named by him after F. Whittla, Esq., distinguished for his support of the Belfast Botanic Garden. Dr. Harvey thought there is a second species, and named it *W. minor*; but it seems to be only the *grandiflora* grown under circumstances unfavourable to its development.—(*Ibid.* t. 4813.)

TABLE SHOWING THE AMOUNT OF RAIN DURING JANUARY, FEBRUARY, MARCH, AND APRIL, 1855.

LOCALITY.	Jan. and Feb.	March	April.	Total, each locality	Average fall during four months.
ENGLAND.	in.	in.	in.	in.	in.
Greenwich	2.36	1.46	0.09	3.91	} 3.98
Nottingham	1.91	0.82	0.83	3.56	
Hawarden	1.70	1.65	0.45	3.80	
Exeter	2.01	2.03	0.61	4.65	
IRELAND.					
Dublin	3.93	1.44	0.55	5.92	} 6.19
Cork	2.53	3.05	1.30	6.88	
Portarlington	1.57	3.10	0.88	5.55	
Armagh	2.18	2.58	2.22	6.98	
Sligo	1.77	2.27	1.62	5.66	
SCOTLAND.					
Glasgow	0.57	1.04	1.10	2.71	} 5.02
Annat Perthshire.	1.98	3.61	1.74	7.33	

Average amount of rain in the United Kingdom from 1st January to 30th April, 1855—5.06 inches.—(*Allnut's Irish Land Schedule*.)

PROPAGATING FRAME.—CAMELLIA IN THE OPEN AIR.

I HOPED, from what you said regarding Mr. Walton's propagating-frame, we should, before this, have had a more minute description of it. May we yet hope for it? I am very anxious to try it at once. (We shall be glad to receive the description.)

I have a semi-double scarlet Camellia which is just coming into bloom, after having stood the last winter without the least protection. We are within a few miles of Brighton, entirely on the chalk, and the Camellia stands about 300 yards from the cliff, sheltered from the west by a wall from which it is distant about five feet, but with a full south and east exposure. It has been there eight years, is stunted in its growth, and has lost much foliage last winter, but has bloomed every year. Probably it would not have stood such a winter when less seasoned.—A SUBSCRIBER FROM THE BEGINNING.

PUBLIC PARKS IN EDINBURGH.

I WAS indebted to Mr. McEwen for a special invitation to see his plans in London a day or two before they were sent in, but I was pre-engaged for that day, and could not attend, for which I was sorry at the time, as, if I understand one thing better than another, it is the fitness of a given design for a certain locality, and I know every inch of the ground embraced in those plans. It now appears that my disappointment has turned two "points" in my favour. I was thus saved from seeing the best plans for the place, in which I might have taken such interest as would have led me into botheration with the Edinburgh critics, who placed them second and third best; and, by so doing, have confirmed, so far, my own pretensions to the spirit of prophecy; for I told Mr. McEwen, in my letter, that unless he had good interest he would only come out second best. Just so has it occurred to the letter; but instead of telling on what I founded this prediction, I will rather place before our readers some of the "evidences" which I have seen to the same effect.

"THE PUBLIC PARK AT EDINBURGH.—The authorities of Edinburgh, it appears, in forming a public park, determined on throwing open the competition for designs to the United Kingdom. There were thirty-eight competitors for the honour, and by the public papers we learn that Mr. George McEwen, of Arundel, the gardener to His Grace the Duke of Norfolk, and who deservedly enjoys a high local reputation in his profession, in this district of West Sussex, has nearly obtained the first prize. We congratulate that gentleman on his great success; and as local celebrities are 'few and far between,' we gladly take the opportunity of transferring to our columns two notices which have come under our observation. The latter, copied from the *Edinburgh News*, appears to give the preference to Mr. McEwen's design; and we may not unreasonably suppose that the plan exhibited by our townsman was equally as good as that of the successful competitor; but perhaps only put back by local influence:—

'We understand that the design for this plan, sent in by Mr. McEwen, gardener to his Grace the Duke of Norfolk, has been pronounced second among thirty-eight competitors, and has been awarded a prize of £25. We can say, from an inspection of Mr. McEwen's plans, that whatever the merit of his rival may be, his would also have produced a very fine effect, and did much credit to his taste.'—*Professor Lindley, in Gardener's Chronicle.*

A leader in the *Edinburgh News* runs thus—"We could have no hesitation in deciding on No. 35, as the best specimen of Artistic Landscape Gardening of all the designs sent in. * * * This design ought to have been selected, as being beyond all doubt the one which made the most of the given space, &c."

"The premiums for the best designs have been awarded to Mr. Davies of Edinburgh, 1st; and Mr. McEwen, Arundel Castle, 2nd. No 35, signed 'Dod' was placed as 3rd. This also, it appears, was from Mr. McEwen, and by many thought the best."—*Daily News.*

In an article on Mr. Davies's plans, in the *Scotsman* newspaper, the "winner," or "favourite" is said to be "*An Architect in our own city*;" but I am faster than the *Scotsman*, for I told Mr. McEwen the very same thing before his plans went beyond London, and who doubts it?—D. BEATON.

[The preceding are not the only opinions we have received that the decision on the plans was wrong. If so, it ought to be revised.—ED. C. G.]

THE STRUCTURE, FUNCTIONS, AND DISEASES OF THE DIGESTIVE ORGANS IN FOWLS.

THE structure and functions of the digestive organs in fowls are so peculiar and important, that I imagine a short and practical account of them may not be uninteresting or useless.

In the mouth, the structure of the beak, and the arrangement of the horny barbs lining the roof and covering the tongue, which so materially assist in swallowing the food,

scarcely call for any lengthened remark; but a few words may be devoted to a consideration of the structure of the tongue, which is stiffened by bone, and covered by a horny sheath, so that the sense of taste must obviously reside in the other parts of the mouth; the hard point of the tongue is of the greatest use in enabling the fowl to pick up grain quickly; and I have noticed that in those birds in whom it had been removed the operation was much more slowly performed.

In all cases of inflammatory or febrile attacks the tongue becomes very dry, and consequently hard; causing the appearance which is frequently termed the *pip*; this is not a disease, but the symptom merely of some internal irritation; the cruel plan of nipping off the end only has the effect above mentioned, of incapacitating the fowl ever afterwards from readily swallowing its food.

The stomach of the fowl being small, a reservoir of food is requisite; this is provided in the crop, which is an enormous enlargement of the gullet, situated at the bottom of the neck. The office of the crop is to receive the food as it is swallowed, and after it has become soft by soaking in the liquid it contains, to pass, little by little, into the true stomach. It is obvious, that if the barley, &c., given to fowls has been previously soaked in water, the time it has to remain in the crop is much lessened. This practice is followed by some poultry-keepers, and the question may be asked, is it a desirable one? Let us, in seeking a reply, appeal to nature and to experience. A fowl in a state of nature cannot obtain its food in the artificially dry state in which it is generally employed, therefore moist corn is more natural than dry; put to the test of experience, I have found that fowls greatly prefer soaked corn. The avidity with which they devour the unmastered oats that have passed through the digestive canal of the horse is one proof. I have found, also, that the oats which are placed in water for my ducks are invariably all eaten; whereas, if given dry, a considerable proportion of the lighter ones are always rejected. I think, therefore, the plan is a desirable one, as it is more natural, is preferred by the fowls, and, I believe, more economical; it is attended with no trouble, as each day's supply of barley can be placed over night in a pail of water.

Another advantage attending its use is the avoidance of the inconvenience of having the birds occasionally crop-bound, a state of things which is caused by the dry grain, when eaten to excess, swelling so as to form a hard, infected mass, requiring an incision to be made for its removal.

From the crop the grain passes into a most important organ, the existence and action of which seems scarcely to be generally recognised. I allude to that termed by comparative anatomists the proventriculus, or, as we might English it, the fore stomach. This is a small enlargement about the size and shape of the end joints of a man's finger, situated between the end of the gullet and the gizzard, with which it is usually pulled away when a fowl is drawn; it is generally regarded as merely the lower part of the gullet; if cut into, however, it will be found very different in structure, being much thicker, and its inside is covered with small prominences, being the glands that secrete the true digestive or gastric juice. This is one of the most important digestive organs of the fowl; for if the gastric juice is not formed, the gizzard, powerful as it is, fails to crush the corn. When fowls are fed upon meat and greaves the fore stomach is frequently thrown into a diseased state, the food cannot pass through the gizzard, and, consequently, accumulates in the proventriculus itself, distending it to so great an extent that I have seen it twice the size of the gizzard; in fact, filling up nearly the entire cavity of the bird; and as the fowl receives no nutriment, it wastes and becomes thin and light to an extraordinary degree, being little more than an animated bundle of bones and feathers.

There is no treatment likely to prove beneficial in this state; but as I have never seen it except in fowls fed on unnatural food its prevention is easy.

One interesting circumstance may be noticed in connection with this organ, namely, that it may, when dried, be used as rennet. If any persons are desirous of using curd as a diet for young chicken, and are unable to obtain rennet, all that is necessary is the fore stomach of the fowls they kill,

and to soak one in a small quantity of water for a few hours, when the liquid will be found to curdle milk most readily.

After having been softened in the crop, and saturated with gastric juice in the fore stomach, the food passes into the gizzard, which may be regarded as a living mill, grinding up its contents with immense force; the thick, fleshy structure of the gizzard is familiar to all; the parts eaten are the two enormous muscles, which by their mutual action one against the other grind and crush the food between them, being aided in this action by the sharp angular stones so freely swallowed by the bird. The gizzard itself is protected from injury by an extremely thick, leathery lining which clothes the interior.

Some persons, alike ignorant of physiology and destitute of common sense, state, that in order to fatten a fowl speedily it is requisite to prevent it supplying itself with stones during fattening. It is not necessary to reply to so senseless an observation. After having been thoroughly ground in the gizzard, the food passes along the intestines, during which passage the nutritive portions are absorbed, and are then mingled with the blood, which is thus enabled to support the vitality of every organ.

Accessory to the digestive canal are the liver, pancreas, or sweetbread, and spleen, or milt. Of these, the liver is by far the largest; its office is to secrete, or form the bile, a liquid which is poured into the intestines being absolutely essential to the digestion of the food. In fowls the liver is not unfrequently the seat of disease; sometimes it is converted into a substance closely resembling fat, increasing greatly in size, and becoming very pale in colour; it will scarcely be believed, but I can vouch for it as a well-known fact, that these diseased fatty livers realize a high price in the markets, being regarded as great dainties. Truly, the insanity of the palate is inexplicable. It is this fatty diseased state which is produced artificially in the geese livers which are the bases of the Strasburg celebrated patties.

Scrofulous tubercles are not uncommon in fowls kept in unhealthy condition; and they appear in young chicken in the glands through which the nourishment should pass on its road from the intestines to the blood, stopping the way and causing wasting and death; and in older fowls are often present in the liver, their existence not being suspected until they soften, causing internal bleeding and death.

From the large size of the liver in birds, and from the fact that it receives a larger supply of blood than the same organ in quadrupeds, it may be readily imagined that its due action is very essential to health. I believe many of the mysterious ailments that affect fowls are owing to its being out of order; and I have found, in such cases, the administration of a grain of calomel has extraordinary effect in improving the general health.

At the risk of having my article compared to a bad fable that does not carry its own moral, I will just draw the practical inferences from the above-mentioned facts, inasmuch as they may be shortly stated. First, soak your grain over night; and secondly, avoid greaves and meat.—W. B. TEGETMEIER, *Wood Grove, Tottenham.*

QUERIES AND ANSWERS.

GARDENING.

HOYA BELLA FLOWERS FALLING.

"I shall take it a great favour if you will, in your next number, give me the reason and remedy for my *Hoya bella* flowers, when about a third grown, turning yellow and falling off. It is potted in the soil recommended in THE COTTAGE GARDENERS' DICTIONARY, and has not been repotted this year, only top-dressed with rough fibry peat. It is growing freely, and is syringed over head night and morning when the Vines are, and is fully in the sun. My *Cyrtocercus* does much the same.—AN AMATEUR."

[We cannot be sure of the cause of this failure. Turn the plant out of the pot and see that the waterings moisten the ball of earth. Plants top-dressed when dry are apt to let the water escape at the sides, and this will produce the

evil complained about, even when the mere growth is not much influenced.]

HOW TO SET A BOILER.

"In a recent number, I see a query, headed 'The shape of a boiler less important than the setting,' in which I fully concur. Now, you would confer a great boon upon all those who, like myself, live at a distance from skilled tradesmen, if you would give a drawing of a saddle-boiler, and its setting, with full directions.—AN OLD SUBSCRIBER."

[We wish this could be well done by one of our hot-water tradesmen. If they do not, some one else will be induced to attempt it. Our only objection to answering the query consists in the fact, that after all we could say, we should not give a better idea than any intelligent bricklayer or mason who could set a wash-house boiler properly. If all the surface of the boiler possible is exposed to the action of the fire, and a good draught secured, all is done that can be done for the purpose.]

SOIL FOR GENTIANELLA.

"F. W. will be obliged if you will inform him what sort of soil you consider best to grow *Gentiana acaulis*. We have a double line in front of the Mansion House here, growing in a loose, black loam, and every year it dies out, more or less. Would a little clayey soil, mixed with the original, do any good?"

[More depends on having a rather damp bottom, or a great depth of good soil that does not easily get dry or powdery. We have seen it flourish in a damp clay soil, and we have known it to live and increase much for many years in a loose, black, sandy loam of great depth, fully exposed to the south, but only eighteen inches above the water of a river which passed behind the garden, where fruit has cankered with the wet bottom after a few years.

There is a beautiful bed of the *Gentianella* now in bloom in just such a situation as the last-mentioned, in the garden of the Warden of Winchester College, and his gardener, Mr. Weaver, says—a great point in its culture is never to disturb its roots.]

CUCUMBERS NOT FRUITING.

"You will oblige me by telling me the cause of my Cucumbers not fruiting. They show one and two fruit at nearly every joint; the plants are clean, healthy, and very strong, yet the fruit, in many cases, goes off quite young. Some arrive to that state near blossoming, but they never open, then die away. The pit they are in, is heated by a flue and hollow chamber under the soil, with ventilators to regulate the heat. I fancy it is for want of sun, as in the morning we do not get it very early, on account of some high trees a few yards distant, and we can always close them soon after two in the afternoon, let the weather be ever so fine, on account of the trees shading them. You will have some idea when I tell you, on the 8th of May, at half-past nine in the morning, the sun just cleared the end of my glass, at the same time the shade had commenced on the other end, to the distance of a yard, over the first cold pit. The distance from one end of my glass to the other is about fifty yards. I made up a small two-light frame about three weeks ago in rather a better situation; at least, we have some three hours sun a-day more. I believe I shall cut Cucumbers there before I do in the said pit.—W. TURNER."

[The want of sun has, doubtless, something to do with your failure; but Cucumbers will do with less sun than most other tropical and next-to-tropical plants, as there is little occasion to perfect the fruit or seeds. Are you sure there was a sufficiency of moist heat given, and enough of air along with it? A strong, continued moist heat, without air, will cause the Cucumber to go at the points, and so will moisture without sufficient heat. If heated below by a flue, plenty of moisture should be supplied to the chamber.]

POULTRY.

IS THE CROWING OF A COCK A NUISANCE?

"I am one of the many who keep a few fowls for amusement. 'They have not yet been profitable,' and I this morning received a threatening letter, a copy of which you will find over. Perhaps you or some poultry-keeper will be able to inform me, if upon any occasion legal proceedings have been taken, and if so, what was the result?—C. C."

(Copy.)

ONE OF THE REGENT STREET NUISANCES.

Mr. _____

Sir,—On making inquiry, I find you are the owner of a male bird which has for three weeks past made such a cackling, as well as an unearthly crow, from about three o'clock in the morning, until seven or eight, that it is out of the question to get any sleep at all in Regent-street. Perhaps you will have the goodness to remove the nuisance with this hint as promptly as your neighbour has, and not compel me to bring the matter forward in other quarters.

H. M. _____ G.

[We are clearly of opinion that the crowing of a cock is no nuisance. Nothing is a nuisance, according to law, that is not injurious to another person. Did any of our readers ever know of proceedings taken to silence a chanticleer?]

SPANISH FOWLS PLUCKING OFF FEATHERS.

"I am a great admirer of Black Spanish Poultry, and had a most beautiful cock of the above sort, but of late he has allowed the hens to pluck him about the throat in that manner that I am grieved to see him. I have tried rubbing with aloes and other nauseous things, but to no purpose. Can you please to inform me, through your valuable journal, of a remedy?—P. H."

[Your birds are probably in an irritated state from high feeding and confinement. Separate the cock from them for a week or two; keep them all upon lower diet, and give them plenty of green food.]

LITTLE CALLA AND OUR PLAYGROUND.

Soft sunbeams come gleaming from the sky of other years—struggling they come, through mist and clouds—patches of blue, too, as I lift the veil.

My eyes, as I muse, are stealing under a little white bonnet beside me, as I talk of the nice time we will have "down in the Hollow," after school time—I note, too, the sweet smile that comes over the red lips of little Calla, through which a dandelion stem is curling; for cherry bright they were then, pale as they have since laid on their coffin pillow.

"Mary must go too," said our white-cheeked one. "And we will tell Lib," said I, "as soon as Miss Clarissa has turned her back."

How little Calla laughed! gleesome as a robin sings—while a faint red came through her skin ever stainless as the thick petals of the pure Egyptian flower. But the colour vanished as if it was a stranger there, and a timid one.

Oh, what a place that old "Hollow" was!—so full of sunshiny dingles, where heaps of violets grew, and little coral berries, that nobody could find as soon as the pale one, with her soft dark eyes, hunting away so still and quiet by herself—then, too, the green-turf-covered little hillocks deemed so *precipitous*! How alps on alps arose in that ant-hill glen! To climb them was like the ascent of Mount Washington; and in winter, Mount Blanc with its eternal snows seemed to involve to the traveller no greater perils, or its summit to inspire no greater ambition to reach, than the tops of the sparkling crusted elevations that rose out of that magic basin; for whether a winter's sun shone upon it, with its cold clear light, or crimsoned its icicles and snowy banks with a rosy glow; or summer dews fell upon its

daisied turf, and filled its golden buttercups, a sweet playground was the old Hollow that lay on the bank of the blue Connecticut.

How full is it now with associations of our angel Calla—she whose fairy life was woven with all the golden threads in my horizon—she whose childhood was sweeter, sunnier, and purer than aught of earth that memory awakens—she whose bright genius would have signalized her as a star, had her light longer emitted on earth—who passed away in her fading loveliness ere her sixteenth summer had come, but not until she had nestled herself in the bosom of her Saviour, and folded her white wings in the arms of Redeeming Love.

Yes—"carry me back" to the old Hollow! Let me follow the narrow path, to the top of the hill—overlooking the green wavelets of verdure below. You know it well, "Lib," for you were oft my fellow-rambler; and Mary, though now sad and widowed, with earth's woes for life's legacy. You can find the path under the apple trees at sunset; and hear the rustling of the elms as they stooped to kiss the little brook that dashed through the hillocks, sparkling and bright; and well as Aunt Molly can see the long shadows that come aslant the ground, even to the garden fence, through which peeped red and damask roses. You can see, too, the golden sunlight, as it danced on the quivering leaves, where the robins had their nests; making your rich locks more bright, while the stealing twilight deepens your eyes soft blue.

But who comes through the wicker-gate from the judge's premises—flying on a zephyr's wing? Her hair is golden and fleecy, and hangs radiant around her pure white face, where the softest rose-tints gleam! She has come to join our frolics.

The stately judge, with his gold specs and elegant mien, is pacing near by, perchance watching us, or pondering on a law case awaiting his decision—which ever it may be, he is proud of his little granddaughter.

But yesterday I saw her of whom I speak. She was robed in sable velvet, a rich train swept at her feet, a mantle of costly lace covered her still beautiful shoulders, and enveloped her full rich form. The blue of her eye was saddened—the soft hue of her complexion was faded; but her air was queenlike and admiration followed her footsteps. To others she was but the elegant intellectual woman; I thought of the *little girl* with her golden ringlets, as she swung upon the wicker-gate that opened on to our playground.

Oh, who has not an old Hollow to remember, where the birds sang in childhood as they will never seem to sing again, where the apples hung golden as California's gems, where the violets were bluer, and the tops of the trees seemed nearer the sky, than all the "heaven-kissing hills" of later years?

Our homes were clustered around the basin. Only our kitchen-garden, and dear mother's flower-plat, in which Calla and I had our parterre, and my younger brothers had their pop-corn hillocks and pea-nut shrubs, separated us from the rear of ours; and the stars often shone down upon us, before we reached the parental nest.

But the first lightning-bug was a signal, and home we went by the light of its tiny wing; and glad was the welcome that ever greeted us from the voice that grew sweeter and more cheerful at the eager call of "mother."

A child's flower-bed! A simple enclosure of six feet of soil, and yet how boundless, and how replete with beauty to the eye that seeks at sunrise for the first blue or crimson blossom that may open its petals to the morning light!

With what eagerness the little frail stem that drooped at evening is scanned ere the dew-beads have ceased to glitter on its tender leaves—and glad as a young mother welcomes the smile of her sick infant, the little one beholds the lifted head of her revived green sapling.

Each little tuft of Heart's-ease with its purple and yellow blossoms—each trailed Morning-glory's violet and rose-colored bells, as they opened their cups to the sun, are pictured in my little garden. But the Lily of the Valley, hid in its leaf of green, pure as the dew it bathed in, was to my eye sweetest and most beautiful; and who but little Calla had such an array of pinks and tulips, sentinelled by planted sticks, each with a floating banner heralding the coming forth of more starry and bright winged *messengers*!—for are

they not all harbingers of hope and love—sweet things to make bright the path of childhood?

So trifling are the treasures that minister to the happiness of children—to deprive them of such refining pleasures seems like taking away their natural aliment.

It is sweet to think of such as we have ourselves enjoyed, for then we know how to gladden the little hearts that think with like emotions; and blest are those who have a little Calla to nestle among early memories, even though the pale flower has been transplanted to the garden that knows no winter—to the Paradise of God.

Still, innocent and pure as are these sweetest of youthful joys, discord will sometimes creep into a child's Eden—its nursery of fragrant things; and the foe that walks "green eyed" through life's path, even enters *here*.

How different were the owners of the two little sister beds, and how differently were their offspring trained! Early and late, were the petted flowers of the loving little Calla watered and propped; while no weed, insect, or destroying worm, was suffered to canker or destroy her treasures; and beautifully they grew, and richly bloomed.

Towering from the centre of her bed, rose her namesake, the Egyptian Plant; its thick, white blossoms crowning the glossy leaves at its base—while around its queen clustered a galaxy of lovely belles.

Moss Pinks formed the centre of Molly's flower bed. She planted her seeds; and so rich was the soil, that her hastily-buried tufted roots grew and blossomed; but without order, or symmetry; and many a worm-eaten bud offended her eye, as she stooped among the luxuriant growth of weeds and flowers for a bud for her glossy curls or fresh young bosom.

She saw that Calla's flowers were ever the dewiest and most unsullied, for *she* had risen early and labored in her vineyard. Yet she loved not beauty, or fragrance better than her envious sister. Where, then, lay the difference?

Calla was ready to "seek" and to "find." She looked not for sunshine nor dew upon *her* flowers, while they were choked by weeds, and the destroyer lay in their path.

Molly trusted to their natural loveliness—guarding not the portal whence the canker-worm entered. Finally, envy took possession of the heart that had hitherto looked out with love and admiration upon Calla's little flower-garden; and one bright morning, when the sweet trustful child came to her work, her treasures lay trampled and broken!

The destroyer was by—buried among her own disorderly growth of flowers. She could not see little Calla's face, but she heard her stifled sob—her low cry of anguish.

"*Oh Molly, who has been so cruel!*" came upon my ear. To this day, I hear that sweet plaintive voice, that soft tone of reproach.

Remorse seized me; with tearful penitence I threw my arms about her neck and cried, "*I am so sorry.*"

Angel little one!—what wast thou ever but Christ-like and forgiving!

"*I can plant more,*" she whispered with streaming eyes; and seeds she did plant in her flower-bed, and in her heart. Both were watered by God's refreshing dews, and though the destroying angel came, and the scythe of Death laid low the child and her flowers, for both there is a resurrection.

O, reader! if you have a little sister who is brighter and purer than yourself, think of little Calla, and that like her, she may be taken from you; and if you would spare your heart memories that bring tears and remorse, never afflict that tender, affectionate heart.

Your cheeks may be brighter, and your eye beam with a more radiant light, but you may borrow lustre from her soul's lamp that may be a meteor to your pathway to heaven.

Be ever tender to the dove-eyed one, for her sun may early set, and her spirit pass from earth, while you are left to mourn that you had not more fully realised the value of the treasure lent you for a season.

Trifle not, then, with ought that gives another happiness—think of little Calla's trampled flower-bed, and remember that the time may soon come when you cannot help the loved one to *plant more*.

NEIL NEVIN.

—(*New York Independent*.)

CONSUMPTION OF BREAD.

ESTIMATING that there are 24,000,000 of bread consumers in Great Britain and Ireland (leaving out the 5,000,000 potato eaters), and allowing each person one and a half loaves per week, it is 36,000,000 of loaves. Admitting that each quarter of wheat makes 136 loaves of bread, it requires 168,656 quarters of wheat per week. To this add 10 per cent. for flour used in other articles, and it gives 295,521 quarters as the weekly consumption of wheat, or 53,367,092 quarters annually. London and its suburbs, with its 2,000,000 population, consumes 3,000,000 loaves weekly; and, with flour, requires 24,626 quarters of wheat. A quarter of wheat will give 50lbs. of flour per bushel, of the quality which makes best second bread—400 lbs. altogether—and that quantity of flour will make 134 quartern loaves. A quarter of wheat ground into flour, and taking out only the rough bran—say about 5lbs. to the bushel—will yield 58lbs. per bushel of such flour, and that will make 141 loaves to the quarter. A quarter of wheat ground down into rough meal, without taking any bran, will give 52lbs. or 62lbs. meal per bushel, and that will make about 166 loaves of healthy good brown bread.

SPRING IS COME!

"For lo, the winter is past; the rain is over and gone. The flowers appear on the earth; the time of the singing of birds is come, and the voice of the turtle is heard in the land."—*Cant. ii. 11, 12.*

Spring on the hills!

The bright aurora of the year hath come!
How leap her heralds, glad and frolicsome,
Adown the rills!

Spring in the vales!

Stern winter's icy zone at length unbound,
Fresh from the bosom of the opening ground
Her breath exhales!

Spring in the groves!

Each twig is vocal with a warbled song;
While the plumed songsters thro' the aisles prolong
Their early loves.

Spring everywhere!

Buds, flowerets, verdure and a vernal sky—
These bid our pulses bound, our fancy fly,
Free as the air.

But there are some

For whom again on earth no spring shall dawn;
The vocal forest and the flowery lawn
For ever dumb.

In Life's warm spring,

From their brief pilgrimage they laid them down,
And o'er the lustre of their young renown
Folds sorrow's wing.

But sunny hours

In memory are theirs, which mourners know;
And beauteous Spring-time! thou at least shall strew
Their graves with flowers.

F. W. B. CANNING.

TO CORRESPONDENTS.

ERRORS.—I observe there are several errors from page 107 and onwards. In that page, second column, "Mr. Walker" should be "Mr. Mackie;" page 108, first column, "Mr. Barker" should be "Mr. Barber." In the same column, and third paragraph, after the words, "*magnifica pleno*," introduce "a plant of *variegata*—a beautiful dense bush, one mass," &c.—R. FISH.

DISSECTING LEAVES (*E. L. A. A.*).—See page 505 of our last volume. We do not know what kind of greenhouse you need. If you require to consult a maker, please to refer to our advertising columns for an address.

PRESERVING APPLES (*H. M.—Ferns*).—Our correspondent, a clergyman, wishes that Mr. Snow would communicate his mode of preserving Apples in a store-room.—If you send us one of the "small black insects" which attack your *Asparagus* underground, we shall be able to tell its name. It is probably a Weevil.

SLUGS (*P. H. G.*).—If lime, and salt, and trapping them by luring them to brewer's grains, will not subdue them, we can give you no aid. Some low-lying situations are overwhelmed by them; and if killed in one plot, others invade that plot from neighbouring inclosures.

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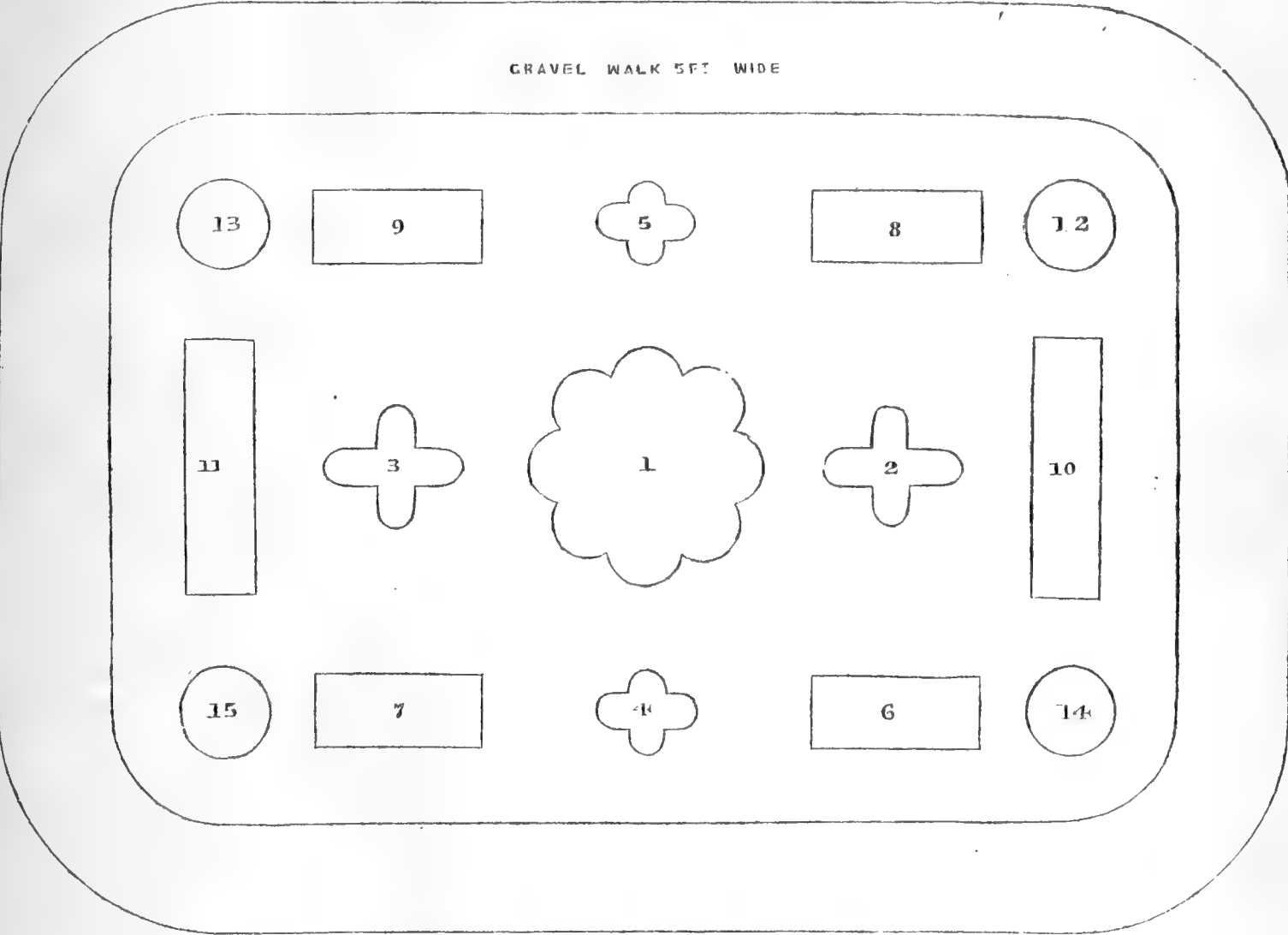
WEEKLY CALENDAR.

D M	D W	JUNE 12—18, 1855.	WEATHER NEAR LONDON IN 1853.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in Inches.						
12	TU	Elater præustus.	29.642—29.565	67—46	S.W.	—	45 a 3	14 a 8	2 16	27	0 37	163
13	W	Elater metallicus.	29.642—29.585	65—47	S.W.	14	45	15	2 38	28	0 24	164
14	TH	Elater riparius.	29.725—29.670	66—52	W.	04	44	15	sets.		0 12	165
15	F	Elater 4-pustulatus.	29.720—29.662	60—50	E.	04	44	16	9 a 45	1	bef. 1	166
16	S	Elater bipustulatus.	29.772—29.622	60—53	E.	04	44	16	10 30	2	0 14	167
17	SUN	2 SUNDAY AFTER TRINITY.	29.657—29.569	67—45	S.W.	45	44	17	11 3	3	0 26	168
18	M	Elater ruficollis.	29.856—29.743	70—45	S.	—	44	17	11 26	4	0 39	169

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 72.6°, and 50°, respectively. The greatest heat, 90°, occurred on the 13th, in 1824; and the lowest cold, 30°, on the 15th, in 1850. During the period 106 days were fine, and on 90 rain fell.

FLOWER GARDEN PLAN.

GRAVEL WALK 5 FT. WIDE



BEDS ON GRASS AND PLANTED THUS:—

- 1. Roses—Old White China in centre, and old Red round the outside, pegged down.
- 2 and 3. Blue *Salvia patens*, pegged down, or *Delphinium Chinense*.
- 4 and 5. White *Campanula carpatica*.
- 6, 7, 8, 9. Scarlet Tom Thumb *Geranium*.
- 10 and 11. Variegated-leaved *Geranium*, Flower-of-the-Day.
- 12, 13, 14, 15. Yellow *Oenothera Microcarpa*.

HERE is an excellent arrangement of beds on a different system from any we have yet published. The *China Larkspur* will be a better match for 2 and 3 than the *Blue Salvia*; and tall *Yellow Calceolarias* might be in the four corner circles, but low plants will do just as well. Square beds are very unusual, but not the worse for that. We would scollop the two end beds next 12 with a radius from the centre of 12, and that is the usual way, and the best way for the ends of oblong

square beds. The verge of grass round the four corners ought to be just two feet wide for this sized garden, and should not be less, if the garden was only half the size; nor more than thirty or thirty-six inches if the garden were ten acres in extent. The ends of 2 and 3 should not stand opposite the middle of the scollops in 1, but opposite the points where the scollops meet, and the same with 4 and 5.

WE have witnessed all the great Horticultural Exhibitions of England, as well as some of those of Continental nations, and we have passed years among the best collection of plants within the tropics; but, remembering vividly all these, we declare, without the slightest reservation, that never before did we look upon such an assemblage of brilliant, well-cultivated plants, as were concentrated within the Crystal Palace on the 2nd instant. Single specimens, or even single genera, we may have seen equal, or even superior, to those then at Sydenham; but the Exhibition, as a whole, had no rival within our memory.

As the Exhibition was superlative in excellence, so never before were twenty thousand spectators assembled together in one building to look upon "the stars of the earth," as flowers have been justly called; and never before were seven thousand carriages arranged before the entrance of such an exhibition.

In another page will be found a detail of the plants and fruits exhibited, from the just and experienced pens of Mr. Beaton and Mr. Hogg; and we must add not only a record of our assent to all their expressions of approbation and complaint, but must also expressly ask for more decisive directions to be given to the ticket-takers and police on future exhibition days, as to the privileges to be allowed to the Reporters for the press. We know of several who were not merely delayed, but were told to apply to other entrances, where there was equal ignorance and similar non-access. Finally, if Mr. Beaton had not done battle valiantly, both he and others would have been ejected long before they had completed their arduous tasks. We thus comment in a spirit of entire friendliness; for no one could be more courteous than Mr. Grove and the whole of the Secretariat,—but they could not be everywhere; and we are quite sure that the Company are as anxious to consider the convenience of Reporters, as they are liberal in furnishing them with admission tickets.

Of course, the mistake of placing a grand piano and a precocious child in the centre of the transept, so as not only totally to interrupt the promenade, but to destroy the noble perspective of the building when its space from end to end is unbroken, will not be repeated. Nor will the canvass awning, otherwise so preservative of the plants, and promotive of their effective appearance, be allowed to descend quite so low. Had it been raised a few feet higher the plants would have been better lighted and the view from end to end less interfered with.

We wish that setting aside all betrayal that successful rivalry was felt, the Horticultural Society had sent its choicest specimens, not for competition, but to deck the Palace upon such an occasion. Such a contribution would have cast a dignity about the Society's fall, for, now, fall it must. The exhibitions at Sydenham will, henceforth, be as superior to those of Chiswick as is the opera to a penny peep-show, with this extraordinary difference, that the Sydenham Opera costs only one guinea a year, and the Chiswick minor entertainment four guineas.

We were especially and beyond expectation gratified by the appearance of the statuary among this glorious embowering of verdure and flowers of all hues. Statues so placed in the open air too often look weather-stained and comfortless—unsuited, in fact, to our chilly, fitful climate. In the Crystal Palace, where there is an unfailing atmosphere of genial temperature, they wear an appearance of brightness and fitness—they look as if they were never chilled by a gust of wind, nor by a shower of rain—a freedom from evil in which the living shared, and which cannot be secured to them elsewhere.

Next, let us offer our expression of admiration of the fountains in the gardens. The fountains are associated in the minds of most Englishmen with some such tame, monotonous ejections of water as are given forth by the great squirts in the Temple Gardens and Trafalgar Square. Let no one imagine that the fountains at the Crystal Palace have even the slightest resemblance to such tasteless tossing up of water as these. So far from it are they, that the elegant forms given to the water at the Crystal Palace are plume-like showers of mingled snow-flakes and crystals. Some persons expressed disappointment as to the deficient elevation to which these plumes ascended; but those so disappointed were not aware that the fountains displayed on this occasion are those of smallest power, and are in what are called the nine basins of the upper range. The most gigantic fountains, in the lower part of the gardens, will not be ready for exhibition until next month. They comprise what are distinguished as the great cascades, and associated with which are the vast double series of circular jets, the centre plume of which will ascend to a height of two hundred and fifty feet.

In conclusion, let us express our hope that the Directors will resolve upon more such Exhibitions, and, if it could be arranged that one of such Exhibitions should extend to two days, so that on the second it might be open to all willing to pay a shilling, not only would the Company's exchequer be enriched, but the intention of the Crystal Palace—the improvement and gratification of the many—be further carried out.

IN reply to a query of a correspondent on PRESERVING VEGETABLES GREEN, we recently stated that we knew no separate work on the subject, nor did we at the time fully comprehend the whole nature of his query. On reflection, we recollected that we had a work in our possession which bears somewhat on the subject, and from which we are enabled to furnish some information to our readers generally. It is written by a French author, M. Appert, and is entitled "*The Art of Preserving all kinds of Animals and Vegetable substances for several years*." Published by order of the French Minister of the Interior, on the report of the Board of Arts and Manufactures." The author states that "this method is not a vain theory. It is the fruit of reflection, investigation, long attention, and numerous experiments, the results of which, for more than ten years, have been so surprising, that notwithstanding the proof acquired

by repeated practice, that provenders may be preserved two, three, and six years, there are many persons who still refuse to credit the fact."

After stating the experience he has had in the cellars of Champagne, in shops, manufactories, and warehouses of confectioners and grocers, for forty-five years, he proceeds to say—"I owe to my extensive practice, and more especially to my long perseverance, the conviction : —"1st. That fire has the peculiar property, not only of changing the combination of the constituent parts of vegetable and animal productions, but also of retarding, for many years at least, if not of destroying, that natural tendency of those same productions to decomposition.

"2nd. That the application of fire in a manner variously adapted to various substances, after having, with the utmost care, and as completely as possible, deprived them of all contact with the air, effects a perfect preservation of those same productions with all their natural qualities.

"The details of the process consists principally—1st. In enclosing in bottles the substances to be preserved. 2nd. In corking the bottles with the utmost care; for it is chiefly on the corking that the success of the process depends. 3rd. In submitting these enclosed substances to the action of boiling-water, in a water-bath, for a greater or less length of time, according to their nature, and in the manner pointed out with respect to each several kind of substance. 4th. In withdrawing the bottles from the water-bath at the period described."

As an example of his practice, we give his method of preserving Dwarf Kidney Beans. "I cause the Beans to be gathered as for ordinary use. I string them, and put them in bottles, taking care to shake them on the stool, to fill the vacancies in the bottles. I then cork the bottles and put them in the water-bath, which is to boil an-hour-and-a-half. When the Beans are rather large, I cut them lengthways into two or three pieces, and then they do not require being in the water-bath longer than one hour."

When they are to be used he gives the following instructions:—"Scald the French Beans as if they were fresh, in water, with a little salt, when not sufficiently dressed by the preserving process. This often happens to them as well as to Artichokes, Asparagus, and Cauliflowers. If sufficiently boiled, on being taken out of the bottles, I have only to wash them in hot water, in order to prepare them afterwards for vegetable or meat soup."

This author furnishes several recipes for other vegetables, all of which are on the bottling principle; but there is another process, which consists in evaporating the watery parts of vegetables and preserving them dry. We recollect, some eighteen years ago, receiving from Hamburgh or Holland, we forget which, a few packages of Sugar Peas, Kidney Beans, and other vegetables, in this dried state, which, when cooked, were as well-flavoured as they would have been in the green state. These, we believe, were obtained by drying in chambers through which currents of heated air were in-

troduced; they were completely dried and shrivelled up, and had the appearance of strips of thick parchment or leather, until they were boiled, and then they swelled out to their usual dimensions. We have also seen Kidney Beans preserved by first boiling them tender, and afterwards drying them in a warm, airy place, when they may be kept for any length of time in bags or boxes, till ready for use. This drying process may be applied to Peas, Beans, Kidney Beans, Cabbages, Cauliflowers, Spinach, Beet, Parsnips, Carrots, Potatoes, &c., the latter being cut in slices.

We are glad of this opportunity of bringing before our readers a subject which is of no small importance in these days of wars and emigration, when food, and particularly vegetable food, is so greatly desiderated; and we do so also in the hope that it may induce them to communicate to us any information they may possess which may be made useful to others. There is no subject in domestic economy of which so little is known generally as the preservation of vegetables, and *vegetable cookery*; and as it is our intention to devote some space to these subjects, we shall be glad to be furnished with any information on the subject which any of our readers have to give. We trust, therefore, that in our endeavours to disseminate information, we shall be seconded in our efforts by those who have the means of doing so. We know, for instance, that some Potatoes require steaming, and others boiling, to have them in perfection; some require to be boiled in their skins, and some without; and we are informed by M. Soyer, that the soil in which the varieties of Potatoes are cultivated has a great deal to do with the mode in which they ought to be cooked.

A few facts on such a subject as this might prove highly valuable, seeing there are so many opinions existing on "how to cook a Potato."

Few, probably, will dissent from an opinion, that enough has been heard on the long-disputed points of nomenclature with respect to the fowls commonly known as "Hamburghs." We have no intention, therefore, of either re-stating arguments already adduced, or of seeking further corroboratory evidence for either party, but would merely avail ourselves of the various "exparte" statements, so far as they may enable us to draw conclusions on the general bearing of the case.

Granted the fact, that Hamburgh is not proved to be the original habitat of these birds (both the Pencilled and Spangled varieties are here spoken of), but, we may ask, is the claim of any other one locality better established? Many may say "yes;" but to this we must demur, since more than one English county might allege their right to bestow a name; while, if we lay aside geographical considerations, the catalogue of popular synonymes is tenfold more numerous; and here, too, there appears no fact of sufficient importance to stamp any one appellation with the accuracy requisite for its general recognition.

Common characteristics are not wanting in both the "Spangled" and "Pencilled" birds which reason-

ably permit their bearing a common designation; while the sub-divisions of each are neither more or less than we should expect to meet with in any similar family of domestic fowls. The Golden-spangled form the class where discussion has been most rife, and specific distinctions have been claimed for the several birds there usually brought together. This claim, however, in our opinion, is not to be sustained; for whether a bird has the spangle round, or in the form of a horse-shoe, or whether the cocks should be hen-feathered or otherwise, are points which in no way remove them from their present position in a common class.

Both as regards the specific name, as also with reference to the several sub-divisions of their race, the "Hamburghs," we repeat, have been well arranged in the Birmingham schedule. This classification we believe to be the best, so far, at least, as our present knowledge goes; and its opponents assuredly have shown no cause to lead us to suppose that any better can as yet be suggested. At any rate, it has the further advantage, and that by no means an inconsiderable one, of meeting with acquiescence from the great body of English poultry-keepers and exhibitors. The same objections that have been raised on the ground of geographical inaccuracy apply equally to some of the substitutions that have been proposed, while confusion worse confounded would be the sure consequent of legalising the admission of the many synonymes now locally employed.

What has now been said lays no claim to be considered as an elaborate summing up of the various special pleadings on either side, but may be considered as representing a fair, though brief, deduction from what has been alleged both *pro* and *con*.

A gentleman well known as one of our most experienced fanciers has long objected to the term "Polish," as commonly applied to the tufted birds shown in the classes so termed. With due deference, however, to an opinion in every way entitled to respect, we venture to believe that no change in this designation will be for the better, either as regards accuracy of nomenclature, or the facility of general comprehension. "St. Jago," "Bearded Hamburghs," and "Paduan" fowls, so far from aiding our enquiry, seem hopelessly to complicate the question, and, geographically considered, rest on no more plausible reasoning than the designation complained of, which is sanctioned by common use, uncontradicted by fact, and fully meets our object in specific classification.

Here, as in the case of "Hamburghs," we argue from the data in our possession, and, while recognising their imperfections and uncertainty, would maintain that no good cause has yet been shown for departure from the common practice, however possible it may be, that circumstances may be brought to light that might materially influence our judgment on both these questions.

The crested fowls not included under the term "Polish" ("Poland" being grammatically incorrect), are properly limited to the "Ptarmigan," and the newly-introduced "Fowls of the Sultan." Of these, the

former, we imagine, are simply inferior specimens of the same original variety, from which the latter have been produced. The "Lark-crested" fowl, it need hardly be observed, has no specific distinction. A freak of nature, or some infusion of Polish blood, accounting for its origin.

"Hamburghs" and "Polish," then, appear to us as terms by which, according to the Birmingham schedule, certain classes of fowls are properly defined, and suggested alterations from this practice have no apparent justification from any of those sources on which their promoters rely.

SUCH of our readers as took an interest in the "Poultry Book," will be gratified by knowing that a Supplementary part is in the press, containing figures, by Harrison Weir, of the Spangled Hamburghs, Dorking, and other fowls, which could not be included in the original work. The letter press consists of much new and valuable information which has reached the Editors since the work was published. As only a small number of the Supplement will be printed beyond the requirements for actual subscribers, we recommend an early application to Messrs. Orr and Co., the Publishers.

HORTICULTURAL FETE AT THE CRYSTAL PALACE.—JUNE 2.

THE first show of plants, flowers, and fruit, at the Crystal Palace, on the 2nd inst., went off most triumphantly. The day was mild and calm, the sun was bright enough, without that heat and glare which soon fatigue a crowd, and take the freshness off the flowers before they are half seen. We had a steady rain, all day, round London, from the south-west, on the last day of the coldest May in the calendar. June opened fair and lowery, with a mild breeze, and on the 2nd, the roads, the grass, the trees, and the whole face of the country looked comfortable and refreshing. Just such a day as one would choose for "going out." There was a state ball at Buckingham Palace the night before, and the Queen was too much fatigued to go to the show, but Prince Albert was there, and looked as fresh as when he left Balmoral, and evidently enjoyed a quiet private chit chat about flowers with Sir Joseph Paxton. There were no more in the party;—the gentlemen of the Court walk behind on these occasions, and the "two Princes" had it all to themselves: but if you heard them talk, and did not know to the contrary, you might have mistaken them for two of the judges for the day; and if I had thrown the die for one of the thirty guinea medals, I would make no objections to their being "officially engaged" on the merits of the entries for the higher stakes.

I happened to know all the Judges; for though now on the woolsack myself, I have been fifteen years on the bench, and I am sure I could not make a better selection. I am equally certain, that our proud position, as a nation of gardeners, is as much owing to the firmness and practical decisions of such judges, as to the loads of gold and silver medals which they have awarded for the last twenty years.

The first thing which a reporter for a show should do, whether it be of plants or bullocks, or "machinery in motion," is to take a rapid glance at the whole, all

round, then the first impression will guide his notes and his notions for the rest of the day. My first impression was that we should have some "pepperwork" before all was done. The different collections of plants could not have been better arranged for effect, or for being seen to the best advantage with the least possible crowding to the visitors; but the time allowed for judging was far too short. They may talk against "routine" to the end of the war, but routine is the very soul and essence of all difficult and complicated works, and without routine of the highest order, no great enterprise can ever be carried out successfully; and where the managers of the Crystal Palace differed from the "routine" of the Horticultural Society, they broke down as completely as at Balaklava. The Heaths, and more particularly the Azaleas, as *classes of plants*, were weakened most completely, as compared to the Azaleas at Gore House.

The regulations about the "privileges" of Judges, Reporters, and their relationship with the police, must be altered, and put on the routine of the Chiswick shows, before they are complete and satisfactory. I am indebted to the authorities of the Crystal Palace for two free admission tickets, without asking, so that I might now write in the plural, and say "we" at every other turn, like the rest of them; that is, instead of saying my wife and I saw this or that, or think so and so; but I rather choose to take all the responsibility of my saying on a single shoulder, so that if anything is wrong I alone am "in for it." Well, I had some difficulty to get into the Palace early in the day, and more difficulty to get out of it, at twelve o'clock, to get the other half of *we* introduced free. When the police went round to clear the Palace for the judges, I had no "exemption ticket" to show them, and we had to battle it out under false colours, but being in possession, and under a liberal patronage, they soon yielded the point to me; but when we get into a system of routine, our "pass" tickets will make every turn as free as air.

Now, for the other side of the card. The managers here have introduced a new and grand improvement on the former systems of exhibiting plants; the greatest improvement, in fact, and the one which was most needed in our day. They offered £30 for the *best staged* collections of thirty plants, as a gardener would say; that is, for a collection of thirty plants, so placed as to give the best *effect*. Just the very thing which THE COTTAGE GARDENER has always held forth about flower-beds, vases, baskets, and all other accompaniments to the flower-garden. One man cuts out his beds at random, goes to a great expense to fill them with the best plants of the day, and yet fails, for "*want of eye*," to give the right effect to them. Another grows his plants into "specimens" with the highest degree of skill, exhibits them for competition, or "sets" them in the conservatory, or show house, or in the living-rooms of his employer; or, may be, on the dinner-table, before "all the company," yet, for *want of an eye*, he fails to make the best of them; and although he is the best gardener in that part of the country, his employers are dissatisfied, because they see such things "in better style" with common people, who cannot afford to pay much for their gardening; the secret being, that the eye goes farther than the purse in all such things—dresses among the rest. The Crystal Palace, as a school, is founded on the principle of teaching by the eye. Its Directors have placed all their own collections and creations on that principle, and now they offer the highest prizes to gardeners, to induce them to learn this principle, and to follow it out through the whole range of the "establishment," even to the setting of two pot-plants on the mantle-piece in the drawing-room, or on the window-sill. For the second collection, best in effect, they offered £15. £7 for the third best; and they have

given something handsome to every one who made the attempt, although, to my own clear knowledge, some of those attempts were not worth one farthing.

There were 150 plants placed on this principle by five competitors, and I have noted the name and the place of every one of them, but as the Crystal Palace Company were so liberal in their prizes, I shall not criticise any of them, at least not to day, farther than by saying that the gardeners seemed to have misunderstood the meaning of the prize for which they competed, and that the nurserymen, the Messrs. Rollison, of Tooting, and Messrs. Veitch, of the Exotic Nursery, King's Road, not only did understand, but nearly overcame a difficulty which was placed in their way, by the arrangement of the standing room for the plants. But I shall give a paper on the subject some day, soon; perhaps next week. Meantime I shall go on with the arrangement of the show, the names of most of the plants, and the prizes.

The fine large collection of THIRTY STOVE AND GREENHOUSE PLANTS, in or out of bloom, placed for effect, and eight collections of twelve stove or greenhouse plants, were staged by themselves, in the centre of the nave near to the Crystal Fountain. The plan of these stages is the same as is followed in the long tents at Chiswick. There are three steps, one above another, on each side of a centre division, which hides one side from the other, the steps and the middle division were covered with pale green glazed calico, which is a better relief than the deep green baize which is used at Chiswick and at the Regent's Park. At the east end, near the Bronze Fountain, was a corresponding stage one hundred yards long, seventy-two yards of which were filled with Orchids,—a grand display. The rest was filled with new and rare plants, Anætochylids, Lycopods, Ferns, Gloxinias in enormous numbers, Pitcher Plants, and small collections of stove and greenhouse plants; also Azaleas, the only tribe which had not justice done them. Six rows of people, or six "abreast," could pass on either side of these stages, so that the room taken up by those masses of plants did not seem to be lost from the space in the nave; but the want of "routine" made an extraordinary blunder between the two groups. The whole centre of the "gangway" was blocked up with a piano, and a hero of a little boy was made to play on it, to show that a child can learn and play music. It was Balaklava all over; the thousands must give up their enjoyment, their rout, and their ideas of plants, till all this music was over, or else walk round half-a-mile or more to get at the next stage. Why, we managed better than that forty years ago at the cattle markets beyond Beaulieu.

The centre groups of Plants were canopied with white canvass to reduce the glare, and the effect, altogether, was extremely good. The rest of the plants, and the fruit, were placed in the front galleries throughout the whole length of the building, with canvass over them also; but here the canvass confined the light to one side, and marred the brilliancy of many of the flowers, particularly the Heaths. I recollect the same thing happening at Chiswick three or four years since, when the roof of the circular iron tent was altered.

In these front galleries were five large collections of twenty stove and greenhouse plants; some small collections of six ditto; four large collections of twenty variegated plants; and three smaller collections of ten ditto. Several large and small collections of Azaleas and of Heaths, with single specimens of each; collections of tall Cacti and Rhododendrons; the Roses, which were not numerous; the Calceolarias, which were in great numbers; the Fuchsias, also, in great force; the Pelargoniums, which were most beautiful; the Pansies very numerous, and were crowded round all the afternoon; the Fruit, equally crowded; and lots of odds and

ends, as new seedlings, variegated Plants, Ferns, and Lycopods.

There were several exhibitors whose names I did not hear at Chiswick, or at the Regent's Park; and there are some who show regularly at both places who did not appear at the Crystal Palace. Mrs. Lawrence made a poor figure; she could not win a third prize in a collection of twelve plants; but she had some extra medal, and had better luck with a collection of twenty variegated plants. Her style of growing plants into huge bushes is now out of fashion. We had only one plant of that style at this Show—a *Pimelea spectabilis*, from Mr. Collier, of Dartford, which completely spoiled the "effect" of his thirty-plant group set up purposely for that end.

The first prize of £30, for a COLLECTION OF THIRTY PLANTS IN FLOWER, OR OUT OF FLOWER, PLACED FOR EFFECT, was given to the Messrs. Rollison, of Tooting. This group consisted of *Erica Lindleyana*, that splendid specimen I noted at Gore House; *Rhopala corcovadensis*, and *Auracaria excelsa glauca*, each nine or ten feet high. Then a fine *Oncidium flexuosum*, with *Cissus discolor*, and a Pitcher plant; then the "Elk-horn Fern," from Moreton Bay, called *Platynerium grande*, with *Erica ventricosa magnifica*, and *Aphelaxis macrantha purpurea*. These were the three principals, and the two flanks to each, in the centre of the group, as a butler would begin to set a dinner-service; but more of this next week. Two *Caladiums*, an *Eriostemon* and *Azalea*; a beautifully-variegated *Pandanus*, and a Fern called *Nephrolepis davallioides*; a *Dendrobium nobile*, and *Lycopodium stoloniferum*, with *Adenandra fragrans*; two match Heaths, *Cavendishii* and *Depressa*; two match Variegated Pine Apple plants; two match Heaths again, *Erica Westphalingia* and *Elegans*, with a Pitcher plant; a large *Eriostemon*, and a *Gardenia intermedia* to match; the extraordinary leaved *Philodendron pertusum*, matched by the no less remarkable Fern called *Angiopteris evitica*, a strong stove Fern; a medium-sized *Azalea*, and a *Polygala* to match. This group was in the centre of one side.

The next thirty were from Mr. Veitch, who had £15 for putting them in their proper places. These were arranged at the west end, and round the south and north corners of the stage—the best situation for showing off the plants individually; but the very worst place in the Crystal Palace for exhibiting the "effect" which was desired. How can you tell the effect of any pattern without seeing all the lines or figures in it at one glance or view? or how could I tell the effect of a certain number of plants, when I could hardly see two-thirds of their number from any one point? There *was* a highlander once, who wanted a gun to shoot round a corner; but the Crystal Palace authorities, and some nurserymen, ought to have known better than that plants, and splendid plants, too, could be seen round two corners. It was not the value of the individual plants, nor the beauty of their flowers or foliage, nor the skill displayed in their cultivation, which were so much desired, as the *effect* which the whole would produce on the eye when seen at one glance; but their value, rarity, and cultivation, would add a good deal to that effect in the eyes of practical men, though these qualities might not tell on the multitude.

Mr. Veitch's plants were better matched even than those who had the first prize; and if the two collections were on two flat surfaces, so to speak, there could not be a five shilling difference between the "effects;" and as such differences are not so well understood and appreciated by the bulk of gardeners as they certainly deserve to be, I must be excused, as an old gardener, for this free criticism; for there is no part of our art which I value so much as that of giving effect to even the simplest things with which we have anything to do.

A man may spoil the appearance of the best pudding that ever was made by putting it on the wrong dish; and so with everything else under the sun.

There were three principals, or centres, in this, as in the first group, consisting of a large *Dicksonia squamosa*—a tree Fern from New Zealand, with seven wide-spreading branches; an *Aërides virens*, and a *Cissus discolor*; two match *Philodendron pertusum*; two match red *Azaleas*; two match Orchids, *Dendrobium nobile* and *Oncidium sphacelatum*; two ditto, *Cattleya Mossia* and *Dendrobium densiflorum*. On one side were *Lilium giganteum*, with twelve flowers; *Coleus Blumei*, *Platynerium grande*, and *Erica depressa*; and on the other side, another gigantic Lily, also with twelve blooms; a golden variegated *Pandanus*; a *Dracæna draco* and *Erica Brunia*; then three dwarf *Palms*, and two *Azaleas* to match.

The third collection, for effect, was at the other end of the stage, and was liable to the same objections; but the faults were not so apparent, as little or no "effect" was attempted by any of the three gardeners who competed for the highest prize. It seems as if most gardeners require a drilling first, as under butlers, to set the dinner service, and to learn the value of a centre and two flanks, a "top," and a "bottom," and four corner dishes; then, between the top and centre, and between the bottom and the centre, the rest of the dishes in the bill of fare must come in as match dishes, either cross cornerwise or straight along. Nothing under the sun is easier when you once get the key to the plan. That key is the centre, whether it be one plant or a single group of plants; then put something different on each side of the centre, and let every two, or pair, to the right hand, and to the left, be as near alike as possible, till your space is filled. If the third plant from the centre on the right hand is *Allamanda cathartica*, let us say, and the third on the left is *Dracocephalum gracile*, of the same bulk as *Allamanda*, how would you stand? You would just be saved from having a pig with one ear, and that would be all. You matched the size, but a bold, single, yellow-flowered plant, with large, glassy leaves, is the very opposite to a small, wiry-leaved, slender plant, with numerous heads of very small white flowers, and, therefore, the two can never make match plants for effect; but come to the nicety of "effect," and you will find it difficult to allow *Erica Cavendishii* and *Erica depressa* to match one another; as, although they are so much alike that Uncle Tom could not tell the one from the other, by the leaves and flowers, their modes of growth split the difference. *Cavendishii* shoots up like a Scotch Fir, while *Depressa* spreads like a thorn Acacia.

All this applies equally in cutting out beds, in planting them, in making nosegays, in trimming bonnets, and in a thousand other ways; and looking at things which are done on a contrary system, or rather on no system at all, affects the eyes of some people like vinegar or hartshorn, while others can look on such opposite things alike, or with equal pleasure or indifference.

The third prize of £7, for effect, was awarded to Mr. May, gardener to — Collier, Esq., Dartford. His top plant was the said huge *Pimelea spectabilis*, which is three or four years older than is now thought exhibit-able, but a useful size to fill a large conservatory. A good *Rondeletia speciosa*, in front of the *Pimelea*, and completely drowned by it; *Hedera tulipifera*, badly coloured; two fine *Eriostemons*, two *Vincas*, two *Epæris*, two *Aphelaxis*, *Allamanda Nerifolia*, *Dendrobium calceolare*, *Epidendron crassifolium*, *Stephanotis floribunda*, *Boronia pinnata*, *Dillwynia nudis sanguineum*, *Erica propendens*, *Phanocoma prolifera*, in bud, *Leschenaultia*, *Polygala Dalmatiana*, *Azalea exquisita*, and *Chorozema Lawrenciana*.

An extra prize of £7 was given to Mr. Reed, gar-

dener to T. Tredwell, Esq., of St. John's Lodge, Norwood, and to Mr. Morris, gardener to Coles Child, Esq., the Palace, Bromley, for collections of thirty plants, for effect. The former had for a principal top plant a large *Erica Bergiana*, five feet by five feet, flanked by a *Gardenia* and a *Pimelea spectabilis*; then a *Heath* and a *Chorozemna*, followed by a *Stephanotis* and an *Azalea*. In the second row he began with a *Cissus discolor*, flanked by a *Phaius grandiflora* and an *Allamanda Neriifolia*; a *Heath* and an *Azalea* next; and then a breakdown. In front, he had an *Azalea optima*, *Boronia pinnata*, and blue *Leschenaultia*, an *Aphelexis*, and a *Clerodendron fallax*, *Coleus Blumei*, a *Vinca*, and a Tree *Lycopod*, *Casium arboreum*.

Mr. Morris had very good plants, but they were neither in balanced pairs, nor in duplicates, nor placed for the contrast of the flowers. There were four *Azaleas*, two *Vincas*, a *Cissus discolor*, a *Hoya imperialis*, a *Rhodostoma Gardenoides* coming into flower, *Medinilla Sieboldii*, a lighter flower than *magnifica*; a *Hoya campanulata*, and a fine plant of *Pleroma heteromalla*; a good old plant, which was once called a *Rhexia*, was then supposed difficult to bloom, and had the habit of going on long bare legs, but now yields to the fashion of the day, though seldom seen in public.

In the Class of TWENTY STOVE AND GREENHOUSE PLANTS, for which also £30 were given, Mr. May and Mr. Green ran "neck or nothing;" but Mr. May, gardener to Mr. Collier, of Dartford, won by half a head, with a noble lot of fine specimen plants—*Epacris miniata grandiflora*, six feet by six feet; *Dipladenia crassinoda*, full of bloom; *Eriostemon Neriifolia*, six feet by six feet, or more; the *Epacris grandiflora*, six feet by six feet; *Aphelexis macrantha purpurea*, four feet by five feet; a fine blue *Leschenaultia*; some *Azaleas*, a *Gompholobium polymorphum*; *Pimelea mirabilis*, with rose-flowers like *Hendersonia*, but a much stronger growing plant; *Erica elegans*, with its powdery-like leaves and flowers, and some others.

Mr. Green had £20 for a similar collection, among which the following were the best—*Acacia grandis*, *Polygala Dalmatiana*, *Gardenia Fortunii*, *Aphelexis macrantha*, with light rose "everlasting" flowers, and *Macrantha purpurea*, with deep purple ditto; *Iwora coccinea*, *Pimelea spectabilis*, *Epacris*, *Eriostemons*, *Azaleas*; an *Erica Cavendishii*, and a splendid *Cactus coccinea magnifica*.

The Messrs. Fraser, of Lea Bridge Nursery, had the third prize—£10—in this class; and Mr. Pamplin, and Mr. Barter, gardener to A. Basset, Esq., had each of them £6, as extra prizes for twenties of smaller but similar plants.

In the collections of TWELVE STOVE OR GREENHOUSE PLANTS, for which £18 was the highest prize, Mr. Dods, gardener to Sir J. Cathcart, Bart., was first-rate again, in the face of six or seven competitors. His plants were *Azalea decora*, one of the very brightest of them, a deep rose; *Erica depressa*, *Chorozema illicifolia*, *Aphelexis macrantha purpurea*, *Pimelea spectabilis*, *Boronia pinnata*, *Leschenaultia formosa*, *Azalea variegata*, *Gompholobium polymorphum*, *Epacris miniata grandiflora*, and *Erica Cavendishii*.

ORCHIDS.

Mr. Veitch had the first prize of £30, for twenty plants, as follows—*Aërides Veitchii*, with long, branched spikes of large, pink flowers; another branched kind of *Aërides*—*Lælia purpurata*, *Vanda suavis* and *tricolor*, *Cattleya Mossiæ*, *Aërides crispum*, *Cypripedium barbatum major*, *Dendrobium nobile*, *Aërides virens superbum*, *Dendrobium densiflorum* and *onosmum*, *Phalenopsis grandiflora*, *Dendrobium moniliforme*, *Saccolabium guttatum*, *Oncidium ampliatus major*, *Calanthe veratrifolia*,

Cattleya intermedia, and *C. mossiæ superba*, with *Vanda teres*; also a first and second prize for single specimens of Orchids.—A fine *Phalenopsis grandiflora*, *Cattleya Mossiæ superba*.

The Messrs. Rollison had £20 for the second best collection, which consisted of a fine large *Sobralia Galeotiana*, whose flowers are lighter than those of *Macrantha*, *Phalenopsis grandiflora*, *Dendrobium Dalhousianum*, *Cattleya Mossiæ*, *Brassia verrucosa*, *Oncidium sphacelatum*, *Dendrobium Mossiæ picta*, *Bulbophyllum Henshalii*, with twenty open flowers; *Dendrobium nobile*, *Sobralia macrantha*, *Cattleya Aclandiae*, with six open flowers, and three more coming—the greatest number of flowers yet seen on this lovely Orchid; *Cattleya mossiæ superba*, and some others.

Among a score of Orchids from Mr. Veitch, but not for competition, were the following, as most conspicuous—*Anguloa Ruckeri*, *Dendrobium Dalhousianum*, *D. Farmerii*, *D. Pierardi latifolium*, and a new, or scarce, *Barkeria Lindleyana*, in the way of *spectabilis*, but with lighter flowers.

The first prize of £30, for amateurs, was given to Mr. Mylam, gardener to S. Reid, Esq., Burnham; the best of them were *Saccolabium retusum*, *Aërides Reidii*, branched and like *Veitchii*, *Cypripedium Lowii* and *Anguloa Clowesii*.

Mr. Williams, gardener to C. B. Warner, Esq., had the second prize (£20), and his best were *Odontoglossum hastilabium*, *Oncidium papilio*, *Vanda teres*, *Saccolabium præmorsum*, *Dendrobium Dalhousianum*, *D. Pierardi* with *Aërides* and *Vandas*.

The third prize (£10), was given to Mr. Hume, gardener to R. Hanbury, Esq. His best were *Dendrobium Devonianum*, *D. macrophyllum*, *D. nobile* and *densiflorum*, *Odontoglossum citrosum*, *Epidendrum bicornutum*, a most difficult kind to do well, and seldom seen; *Aërides virens*, and others.

Mr. Wooly, gardener to H. B. Ker, Esq., had an extra prize in this class, his extras being a fine *Aërides crispum roseum*, a large *Dendrobium Paxtonii*, and *Epidendrum rhizophorum*.

In the next class of twelve plants there was a close contest between J. H. Schroeder, Esq., and Mr. Basset, gardener to R. S. Holford, Esq., of Westonbirt; but Mr. Basset won the day, and had £18. His best were *Saccolabium guttatum*, *Dendrobium nobile*, *Oncidium sphacelatum*, *Dendrobium densiflorum*, a huge *Maxillaria tenuifolia*, *Dendrobium fimbriatum*, *D. Mossiæ*, and *Cypripedium barbatum*.

Mr. Schroeder had £12 for the second best, and the most conspicuous of them were the Cow's Horn of Honduras, *Schomburgkia tibicinis*, *Lælia cinnabarina*, *Vanda suavis*, and *Phaius Wallichii*. Mr. Clark, of Hoddoston, had the third prize, £6. He had a fine *Dendrobium clavatum*, and some very good *Aërides* and *Saccolabiums*.

In the next class, three of our very best growers competed with ten plants each, and Mr. Carson, gardener to W. F. G. Farmer, Esq., had the best of it—£10. The principals were *Cypripedium barbatum superbum*, *Dendrobium nobile*, *Brassia maculata*, *Cattleya Mossiæ*, *Epidendrum longipetalum*, and *Saccolabium guttatum*.

Mr. Dods, gardener to Sir J. Cathcart, Bart., had the second prize (£6); and Mr. Green, gardener to Sir E. Antrobus, Bart., the third—£3. Among them the following were very fine plants:—*Anguloa Ruckeri*, and *Dendrobium densiflorum*, in Mr. Dods' group; and Mr. Green had *Oncidium divaricatum*, *Dendrobium nobile* and *densiflorum*, *Aërides odorata*, and *Oncidium ampliatus major*.

Mrs. Lawrence sent twelve Orchids, of which *Phaius albus* was the best, but received neither a class prize nor an extra.

There was another collection of nice, moderate plants,

from Mr. White, gardener to A. Kenwick, Esq., West Bromwich, which ought to have had an extra prize, if it were only for his *Oncidium bifolium*, with nine spikes of flowers of the finest yellow in the genus; the largest number of flowers, by many odds, which was ever exhibited on *bifolium*, which no one could grow fifteen years ago but Mr. Loddiges.

Mr. Keele, gardener to J. Butler, Esq., Rectory Place, Woolwich, had another of these collections, in which were a fine *Brassia verrucosa major*, a *Lælia cinnabarina*, and a *Phaius Wallichii*.

NEW PLANTS.

There were several other exhibitors, and some single specimens of Orchids, at which I could not reach for the crowd; as it was, my sides suffered severely. I never saw such a push to see Air-plants before. As luck would have it, there were thousands there who knew not of *Wellingtonia*, which was shown by Mr. Veitch, so that one could see his new and rare plants better than any others; and for the best newest plants in flower he had the first and second prize; two of these were very rare and very beautiful. A clear yellow, shining *Rhododendron* from Borneo, with leaves like an Oleander; and *Embothrium coccineum*, which is hardy, or nearly so, and the flowers of a crimson scarlet. A *Rhododendron Californicum*, more in the style of older kinds, and a *Weigelia amabilis*, a far better flower than *rosea*. For his newly introduced plants, not in bloom, he had all the prizes. Here were *Lomatia feruginea*, and *Sonerila Margaretacea*, which is called *maculata*, in one of my reports of last spring. The *Lomatia* I described last summer; *Anæctochilus Veitchii*, a *Saracenia*, a new variety of *Maranta rosea lineata*, called *elegans*, and *Aralia papyrifera*, which I mentioned two weeks back.

The Messrs. Rollison had a most lovely new stove-plant, called *Meyenia erecta*; the accent is on the second *e*; it was loaded with large Gloxinia-looking flowers, or rather between that and the shape of a Maurandia flower, of soft blue-lilac colour, tinged with purple, with a light bottom to the tube. The plant is a stiff grower, with small opposite leaves, like some old stove Jasmines. It belongs to the group of Thunbergias, and was named after Meyen, a celebrated botanist, by Nees Von Esenbeck, the great authority for Acanthads.

Mr. Ayres, gardener to Lord Southampton, is the only private grower who sent "new or rare plants" in bloom. He had a large specimen of a *Blandfordia*, with twelve upright spikes, loaded with drooping, orange-yellow flowers, and *Impatiens Jerdonie*, *Sonerila Margaretacea*, not in bloom, and *Hydrolea azurea*, with only one flower open. Mr. Ayres missed a chance of distinction by showing this plant in such a deficient state. It is one of the finest plants of that style in the Mexican Flora, and would have been the lion of the day if it had been covered with bloom, as all showy plants ought to be when they "come out." The same pains which are taken with young ladies, for their first appearance at court, should be taken to issue a really fine plant into our gardening world. This very plant made a sensation all over the continent this time two years. It had the first prize at Brussels for a new plant, in July, 1853, and so everywhere else abroad. Our amateurs, and our trade, paid a high price for it, and now it is, or has been, murdered by "indiscretion;" and it is ten to one if one in ten thousand had taken the least notice of it at the Crystal Palace. It might be called a soft-wooded greenhouse-plant; but it gets woody, with slender branches, and very small leaves, and when covered with its elegant light blue flowers it must be one of the prettiest plants anywhere. The exact tint is half-way between the blue *Nemophila*

and our own *Veronica chamædrys*, with starry white stamens, and the flower is two sizes larger than those of the said Veronica. Every body must have this plant, when it comes to so many pence. It belongs to the same order of plants as the *Nemophila*, *Eutoca*, and such like.

Messrs. Standish and Noble sent a fine standard plant of *Rhododendron Dalhousiae*, a grafted plant, seven feet high, having had six trusses of blooms, but two of them had fallen off. This extraordinary *Rhododendron* blooms like a large Lily, with the scent and colour of *Magnolia grandiflora*. Also *Azalea crispiflora*, a unique kind, from the north of China. It is, by nature, a July-flowering plant; but this one must have been forced on purpose for exhibition. It seems to be a natural species, an evergreen, with large rose-coloured flowers, which are crisped on the edges like a frill; the habit is dense, the leaves good, but the quality for which I take so much notice of it is as a father, mother, and nurse, to an entire new race of evergreen Azaleas, which will bloom out in the open garden just as well, and as gay and prolific as the present race do in the greenhouse. This is only a question of time. Then *Azalea amœna* comes in to keep down gross habit, and to give the right form, as *Azalea variegata* has done for the present race.

The same firm sent cut flowering-branches of the new *Spiræa grandiflora*, another hardy plant for the British garden. They also exhibited, but not in bloom, four species of *Evergreen Berberis*, from China and Japan, and all of them are as hardy as our old ones. *B. Japonica intermedia*, and *Beallii*, stood the last winter unprotected, but I believe *trifurcata*, which is from a different part more westwards in China, was not exposed to the frost. Mr. Fortune told me, when this *Berberis* was first shown at Chiswick, that it would be the best of the race, and that he believed it would be hardy in England. Messrs. Standish and Noble also exhibited a species of *Lomaria*, from Valdivia, after the manner of *Magellanica*, but with paler and broader leaves, not to use the fashionable but most erroneous word, *frond*, for a Fern-leaf; and my own most favourite evergreen, the *Weinmannia tricosperma*, also from Valdivia, and, therefore, likely to be hardy. You might pass off the leaves of this beautiful plant for so many Ferns among ordinary mortals, by calling them fronds. They are compound and pinnate, just like so many Fern-leaves, the wings or little side leaves are opposite, and the stipules between each pair of leaves are leafy, and sawed, just like the rest of the leaves; in fact, a frond to all intents and purposes. I do not recollect, even among *Mimosas*, a more beautifully-leaved plant for the Crystal Palace than this; and if I were rich enough, I would buy the largest plant of it at Bagshot, and present it to the Palace Company, in commemoration of their first exhibition of plants, although they did not give me sufficient time to tell of it.

I could not get to the *Ferns*, nor could I have done much if I could; and the same must be said of *Gloxinias*, which were very numerous. The *Lycopods* I have often told of, and so of the many kinds of *Anæctochilus*, and the variegated, and many of the fine-leaved plants, all of which are very numerous, but there were some trumpery things among this miscellany which ought not to have been admitted at all. There is no quality much better than "good nature," but you may abuse it, in conducting shows, to your own prejudice.

HEATHS.—The *Heaths*, like the Azaleas, were in so many places that the effect was entirely lost. The Messrs. Rollison had the first prize for the best ten of them (£10), and they really were splendid plants, and very showy kinds, as follows—*E. ventricosa coccinea*, *Ventricosa magnifica*, *Propendens*, *Cavendishii*, *Vassiflora*,

Perspicua, and *Perspicua nana*, *Elegans*, *Mutabilis*, and *Depressa*.

The Messrs. Fraser had the second prize for Heaths (£7). Their best were—*Vestita rosea*, *Vestita coccinea*, *Grandiflora*, and *Densa*; and Mr. Frost, gardener to E. L. Betts, Esq., had the third prize; and there were four extra prizes for them to Mr. Williams, gardener to Miss Trail; Mr. Reed, gardener to T. Treadwell, Esq.; and to Mr. Clark, of Brixton Hill; and Mr. Jackson, of Kingston, my next door neighbour. He had *Ventricosa coccinea minor*, a pretty dwarf *Nivea*, a dark variety of *Hartnelli*, *Cavendishii*, *Odorata rosea*, *Glaucia* or *elegans*, *Florida*, *Albertus superba*, *Tortula*, and *Depressa*. I will conclude my notes on the show next week.

D. BEATON.

FRUIT.

The Fruit was in perfect keeping with every other part of the Show, as regards quality, but not in quantity. There might have been more, but there could not be better. We should like to have seen a greater display in this department, as we always feel that in the forcing of fruit the ability of the gardener is exhibited to the greatest advantage. In the *Miscellaneous Collection*, the most prominent were those of Mr. Fleming, of Trentham, and Mr. George McEwen, of Arundel Castle—the very names of whom are a sufficient guarantee for the quality of the productions. The former consisted of *Murphy Brugnion* and *Violette Hâtive* Nectarines, *Royal George* Peaches, *Mayduke* Cherries, very fine; three bunches of *Black Hambro'* Grapes; and a dish of *Brown Ischia* Figs; two specimens of *Bulgarian Melons*; two of *Hybrid Dampsha Melons*, raised at Trentham; two of *Moscow Pines*, severally 2 lb. 14 oz. and 3 lbs. weight.

Mr. McEwen's consisted of a dish of *British Queen* Strawberries, as large and finely-coloured as ever were seen; three bunches of *White Frontignan* Grapes; three of *Black Hambro'*, with immense berries, and black as jet, exhibiting the results of severe thinning; a dish of *White Dutch Currants*, large, and very fine; *Mayduke* Cherries, as large and better coloured than those from Trentham; two dishes of Gooseberries, *Sovereign Amber* and *Green Orleans*; such a dish of *Hautbois* as we had never seen before, being quite as large as *Keen's Seedling* of ordinary growth; the *Brown Brunswick* Fig, and *Rivers' Perpetual Bearing* Raspberry, completed the collection.

In Class G, which consisted of 12 lbs. of Grapes, the exhibitors were, Mr. Hughes, gardener to Mr. Eaton, of Shacklewell; Mr. Davis, of Oak Hill, East Barnet, whose *Black Hambros'* were very large and long bunches, fine berries, and beautifully coloured; Mr. Scruby, gardener to Mr. Hughes, of Stoke Newington; Mr. Harrison, of Oatlands Park, had *Black Hambros'*, also fine; as were those of Mr. Spary, of Brighton, and Mr. Solomons, of Peckham Rye.

Class H consisted of three dishes of Grapes, and the exhibitors were Mr. Mashin, gardener to Sir H. Fleetwood, and Mr. Hill, gardener to R. Sneyd, Esq., whose *Black Prince* and *Black Hambros'* were very fine; but the *Muscat of Alexandria* rather inferior.

In Class I, one dish of Black Grapes, the competitors were very numerous; but the best productions were those of Mr. Sharland, gardener to T. Farmer, Esq., of Gunnersbury, whose *Black Hambros'* were immense bunches, very large berries, and of good colour; Mr. Roser, gardener to G. Bradbury, Esq.; Mr. Clarke, Hoddesden, Herts; and Mr. Dods, gardener to Sir G. Cathcart.

Class J.—One dish of White Grapes, the best of which seemed to be Mr. Bradley's *White Frontignan*, and Mr. Ayres *White Muscadine*.

Class K included *Muscats*, of which the best were

from Mr. Turnbull, gardener to the Duke of Marlborough, at Blenheim, and, though very fine bunches, and very large berries, it is to be regretted they were not quite ripe.

Class L included four dishes of Peaches and Nectarines, of which the *Murphy*, *Violette Hâtive*, *Royal George*, and *Grosse Mignonne*, of Mr. Fleming, of Trentham, were the best. The Strawberries were magnificent; the Cucumbers like walking-sticks, and of Pines there was a perfect forest, set up as they were in their artistic and graceful-looking jars. There were also several pots of Vines well-fruited, and sundry odds and ends, such as Raspberries in pots, Prickly Pears, Citrons, Lemons, and Oranges.

We regret our inability to supply the prize-list of the fruit. We made application for it, but at the time of going to press had no reply.

R. H.

COVERED STREET FOR LONDON.—We hear of a scheme, under distinguished auspices, for the formation of a road through London, eight miles long, roofed in with glass, with houses and shops on each side, and beyond these, also on each side, two lines of rails, one above the other, the lower for trains stopping at every mile, the upper for expresses.

MATERIAL FOR PAPER.—The bill for the incorporation of the Fibre Company, for supplying the want of a cheap material for paper by means of the fibre of common flax, has passed its third reading in the House of Commons.

AZALEAS ATTACKED WITH THRIP.

"I HAVE," says "An Old Subscriber," "some Azaleas in flower, good plants; but from Thrip, &c., they have lost their lower leaves which makes them look very bare. Would you give me some advice as to their treatment, potting, pruning, and temperature, &c.?"

This is one of the worst inflictions to which the Azalea is subject. We have tried numerous remedies, and a closish, moistish, warm atmosphere, with plenty of the syringe, and the use of weak sulphur and lime-water will do much to mitigate and remove the evil. The best remedy, however, is tobacco. The plants should be placed in a close house, or frame, and smoked two or three times in preference to using it too strong at first. Two or three days may elapse between the smokings, and thus those Thrips that were just coming into active existence at the first smoking would get a dose at the second. Even smoking, however, is not so effectual as syringing the plants thoroughly, or dipping the heads in a weak solution of tobacco-water. If the plant is laid down on a board over a wide tub, there need be little waste of the water in the process of syringing. The great thing is to turn the plant in the operation, so as to secure wetting the underside of every leaf. Care should also be taken that none, or as little as possible, of the water finds its way into the soil of the pot. A couple of ounces of good shag tobacco would be enough for two gallons of water. The tobacco should be soaked in a vessel supplied with boiling water, and allowed to stand covered until it is cold before the rest of the water was added. When thus well syringed, the plants should be laid down so that the tobacco-water does not trickle down into the soil, and when dryish be placed upright, and kept in the shade for a day or two, then well

syringed in a similar manner with clean water, and then placed in their growing quarters. Very likely a repetition of the dose may be needed, and this should be done before there is much signs of growth, as if the foliage was tender there would be more necessity to be careful in using the tobacco-water, and also the smokings in a more mild, reduced shape. If water is made from tobacco-paper, or the tobacco-water is purchased at once, or the tobacco purchased is extra strong, care should be taken not to overdose the plants. It is safer to repeat the operation. My neighbour, Mr. Fraser, of Luton Hoo, who has a splendid lot of Azaleas, told me he once was troubled with the Thrip, and found nothing so effectual as syringing with tobacco-water, by having the head of the plant held leaning downwards over a tub, so as to catch the fluid that ran off the leaves.

PRUNING.—If the shoots are yet alive there will be little pruning necessary, and even that may be deferred until the plants are encouraged to grow in a genial temperature. In established plants little pruning will be needful, farther than merely stopping the points of strong shoots that threaten to rob the others. The great thing is to get every young shoot of equal strength, if possible, and then, if these are suitably grown and matured, each of these shoots will be terminated with a flowering-bud. If a number of shoots are allowed to steal a march on the others, they will prevent many from starting altogether; and then, if these robbers are not too luxuriant to bloom at all, the surface of the plant, as respects bloom, will be jagged and uneven. It is necessary to stop these extra strong shoots early, say when one-inch in length, so that the two or three shoots you thus obtain, instead of one, may have time to mature and ripen the flower-buds before the autumn. When a plant is in a very straggling, unhealthy condition, it may be advisable to cut it close in, and induce it to break, if possible, by placing it in a high, moist temperature; but unless, when the question is either an improved appearance, or consigning to the rubbish-heap, it is not advisable to do much in the pruning way, but rather to confine it to the above pinching operation.

POTTING.—This I prefer doing when the plant is beginning to grow freely, after the flowers and withered leaves, &c., have been removed. In general cases, it is advisable not to give large shifts. The best heath soil should be used, choosing that which is most fibry, and mingling with it a good proportion of silver-sand, a little charcoal in small pieces, and a few bits of free-stone, or broken crocks. It will not be possible, in the case of a healthy plant, to remove much of the old ball, but the sides should be gently broken with the fingers, or a small, pointed stick, so as to break the regular outline mark of the pot, and disentangle the points of the root-fibres, so that they may enter freely into the new compost. I have performed this operation throughout the summer, and also in the autumn; but when done late, the flowering often suffers the following year. In the case of large, established plants, repotting may be deferred for years, moving away a little of the surface, and replacing with a fresh coat of an inch or so of compost, after being assured that the drainage is all right. Then, using weak manure-water when the plants are growing, and again when about to expand their bloom-buds, will keep them in a healthy condition for a long time.

TEMPERATURE AND POSITION.—As soon as the plants are denuded of their flowers they should be well syringed, and kept closer and warmer than usual, but the warmth should not be much increased for a week or a fortnight after the flowering is over, that the plants may have a little time to recruit their strength, as it were. Any place, then, will be suitable, where a moist

temperature of from 55° to 70° can be maintained, and a slight shade in very bright weather secured. Nothing answers better than the floor or stage of a Vinery, where the Vines are chiefly confined to the rafters. Care, however, should be taken that the plants are free from Thrip before placing them in such structures. Of course, the same conveniences may be secured in pits and other houses. If there is nothing but a greenhouse, the plants should be placed at one end, and little air given there, while abundance of air is given at the other end, so as to suit Geraniums and hard-wooded plants in bloom, &c. Where there is only one house, it would be vain to expect the plants to bloom early.

When the flowering takes place early in the season, and there is the opportunity of forcing the plant into early growth, and then maturing that growth, the plants will be easily forced into bloom in the beginning of the year, and will obtain a tendency to bloom early naturally.

The treatment as to position of the plant will greatly depend upon the time it blooms, and the means of perfecting the growth of the current year's wood. A little shade in bright sunshine, a highish temperature, and a moist atmosphere, with a free use of the syringe, and weak manure-water at the roots, made from cool instead of hot manures, will greatly promote and accelerate the growing process. As the mass of young shoots become from one to two inches in length, more air and more light should be gradually given to counteract mere extension, and to consolidate the young shoots, so as to insure the formation of the flower-buds,—technically, "the knotting for bloom." Thus treated early, the plants may stand out-of-doors in August; late ones in September, and later still in the latter part of September, and the first fortnight of October. The plants, if gradually inured to it, will take no harm from sunshine if the pots and roots are protected. If the plants are kept in-doors they will require all the sun and air it is possible to give them after July and the first part of August. If not forced during winter, any place with an average temperature of 40° will keep them well; and the less stimulus they receive before it is desirable to start them into bloom, the better the plants will do. The above temperature, and a few degrees lower, they will bear without injury; in fact, as has already been shown, many are likely to be hardy. The plants will lose many of their leaves, so as to become somewhat semi-deciduous; but this need occasion no alarm, as there will be plenty of young foliage with the flowers; and these flowers, if the buds were all right, would have next to killed the old foliage by their shade, at any rate. I mention this, because last winter I was asked what to do to recover a lot of plants which needed no recovery. They were merely taking a comfortable rest; throwing off their redundant drapery, and, as the spring proved, could not well have been in a better condition.

During the rest period little water will be needed at the roots, and that little should not be over cold, nor over warm, but a few degrees above the average atmospheric temperature, and always given, if really necessary at that period, during the forenoon. A slight sprinkle over the foliage in a fine day will be better than keeping the roots in a saturated state. When it is determined to start the plants, free waterings will be necessary, and the water should be little below 60°.

THRIP IN VINERIES FROM AZALEA PLANTS.

"I PERCEIVED a few jumping little insects on my Vine leaves; they seem to leave marks on the leaf as if they were scalded—a shining appearance. What are they? and how can I get rid of them? I observe the same marks on Azaleas introduced into the house to be forwarded." There can be little question as to the insects,

though I should be more certain did I see a leaf or two that were affected. The Azaleas must be treated as above recommended, and the house must also be smoked repeatedly until the insects are wholly destroyed. If they have not held possession long, a few smokings will be sufficient; but if they have had time to produce numerous colonies, the process will have to be repeated often. If you attempt to syringe with tobacco-water it must be weak, and the berries must be young. Clear sulphur lime-water, in a weak state, will also be useful. Laurel-water, formed by bruising a bushel of leaves and young shoots, placing them in a barrel, pouring over them a gallon of boiling water, and covering up as carefully as if you were making tea, or brewing beer, and then, when cool, adding from six to eight gallons more water, and syringing with the clear portion, I have found the best thing for destroying and banishing Thrip, next to the tobacco-water. The laurel-water leaves a pleasant smell of custard confectionery behind it. When I grew Cucumbers and Melons largely, in houses and pits, suspended from trellises, I used to keep them clean of this pest chiefly by means of the laurel-water and the sharp eyes and fingers of a boy. These insects have really taken possession in good earnest if ever they are seen on the upper side of the leaf. When there is free access to observe the underside of the foliage, it is amazing how soon a sharp boy will catch a great number of these quick-jumping fraternity. In an instant, the eye traverses the under surface of the leaf, and if a Thrip is visible, a finger, kept wet, is pounced upon him as quick as lightning, and when waddling in what to Mr. Thrip is a regular river, there is little occasion for conference as to what is to become of him. Such Thrip-catching can only be attempted on large-leaved plants. With such plants as Azaleas, recourse must be had to other means.

I speak rather feelingly on this subject, as I once got the Thrip into a house of Vines through putting some large Azaleas there which, unknown to me, had got the insect upon them. Too secure, I never noticed the Thrip until he got pretty well ahead, and the grapes were too forward to admit of many applications to destroy the insect. After injuring the foliage considerably, they actually attacked the fruit, which gave many of the berries an unsightly, blistered, dotted appearance; and so afraid was I of not being able to keep the fruit, that I used it up as soon as fit to cut, and preserved for later use an earlier house. Tobacco-smokings, though mitigating, did not remove the mischief, and I found that the remedy was about as bad as the Thrip, as the flavour of the ripening fruit seemed to be affected. No time, therefore, should be lost in effecting a remedy whilst the crop is young.

I did not succeed in banishing this mischievous pest, and I attribute the ultimate riddance to shutting up the house close as soon as the fruit was cut and the wood well ripened, and burning sulphur inside, preventing the fumes escaping as much possible. All the foliage was allowed to remain until the burning the sulphur had been repeated. The process has several times been explained. Two precautions are necessary. First, that the fumes should reach no plant in a growing state, or which would be injured by destroying its foliage. Deciduous plants only will, therefore, bear this treatment. And secondly, even deciduous plants will bear it without injury only when the wood is thoroughly ripe. If at all green and succulent, the wood will be destroyed as well the foliage.

On examining the leaves, after a second dose, the Thrips seemed dead; but next season, though the house was all washed with soap and water, though the Vine-stems were first cleaned, and thoroughly washed with warm soap-water, and afterwards painted with sulphur, clay, &c., still I had a few Thrip make their appearance

the following year, which were subdued at an early stage by tobacco fumigations and removing an affected leaf as soon as seen. A few eggs had probably escaped the sulphur fumigations, as well as the washings and paintings. I imagined that nothing could long live in a house filled with the smoke and fumes of burning sulphur; but perhaps even this is not so destructive to animal life as is generally supposed. At any rate, I was very much surprised, last year, in opening a house that had been so fumigated and shut up for forty-eight hours nearly, to find a Robin hopping about, quite comfortably, to all appearance, though even then the fumes were anything but pleasant. The Robin might have got to some cranny, or near to where he could inhale a little air from some unseen opening; but even with all these advantages in his favour, it is well known that a little of these sulphur fumes will soon tumble a larger fowl from its perch.

"Burned children dread the fire;" and ever since, though well aware that I could not give Azaleas a better place in the early part of summer than beneath the shade of Vines while beginning to grow, I am shy enough about introducing them there, and sometimes prefer a later bloom, by keeping the plants in the conservatory, to running any risk of getting such a pest on the Vines. Our correspondent will do well to use the tobacco-water for the Azaleas, and the tobacco-smoking for the house generally, without delay.

R. FISH.

HOLLYHOCK PAPER.—Paper as well as rope have been made from the fibre of the Hollyhock by Mr. Niven, gardener at Keir House. He has patented his invention.

THE GOOSEBERRY CATERPILLAR.—Some idea of the extent to which this pest has spread may be gathered from the fact, that Mr. Morris, the extensive market gardener of Iselworth, has, at the present moment, upwards of *one hundred* women daily employed in picking these caterpillars from the Gooseberry bushes.

IPOMÆA HORSFALLIÆ.

(MRS. HORSFALL'S IPOMÆA.)

THOUGH the genus *Ipomæa* contains many beautiful freely-flowering climbers, yet there is none, in my opinion, so handsome, both in foliage, in bud, and in flower, as the one named in honour of Mrs. Horsfall, the lady of the gentleman who introduced it from the East Indies so long since as 1833. Some years ago, I saw the original plant, and it was so highly valued, that the entire roof of the stove was given to it, and was thickly covered with its branches and blossoms. Since then I have seen specimens in various places, but none are so strong and well-grown as the original. Mr. Horsfall resided then at Everton, near Liverpool, and had a fine collection of plants, especially Orchids; but, alas! (for the plants) Liverpool, like London, has walked out into the green fields, and almost sacrilegiously into many pleasant gardens, causing sad havoc with plants and plant-houses. Mr. Horsfall's place is swept away, and bricks and mortar, in the shape of houses, cover that pleasant spot. What became of the splendid plant of *Ipomæa Horsfalliæ* I know not. Fortunately it is now plentiful,—so much so, that a good plant may be purchased for 3s. 6d. As some of our readers may not have seen it, and have a stove to

grow it in, I confidently recommend it as one of the finest stove-creepers we have; and in order that they may succeed in cultivating it, I will describe the way that I have grown and bloomed it myself.

DESCRIPTION.—It is a stove evergreen twiner, with leaves three and five parted, and rather small compared with many others of the genus. The flowers are produced both at the axils of the leaves and at the ends of the shoots beyond the leaves, in corymbs or bunches. The number of flowers on each corymb varies from three to ten or twelve, according to the strength of the plant. They last three or four days, and open in succession; so that the flowering season is extended to a month or six weeks, or even longer. The season of blooming is September and October.* The colour of the flowers is bright crimson, and each flower is nearly two inches diameter. The buds also are very ornamental; they are roundish oval, black, and shining,—looking like a bunch of fruit before the flowers expand. Flowering so late in the season, when the bloom of most other creepers is over, renders it the more valuable as an ornament to the rafters of the stove.

POSITION.—This fine twiner does not bloom well in pots, therefore it should always be planted out in a bed of earth in the stove. The corner of a bark or leaf-pit is an excellent place for it. The corner might either be walled off from the tan-bed in a triangular form, or in a square two feet across. Whichever form is adopted, the bricks forming the sides next the tan or leaves should be built in pigeon-holes, to allow the heat to enter the soil, and to allow the roots to expand themselves amongst the tan or the leaves, which greatly encourages the growth of the plant.

This position, however, is not absolutely necessary, though bottom-heat does assist its growth and bloom. The plant I had under my care was planted in a small square pit, close to the hot-water pipes, where it did very well. The original plant at Mr. Horsfall's was planted out in the inside border of the stove, the soil of which was partially heated by the flue (hot-water was unknown then). Let any one wishing to grow this fine plant, then, plant it in the warmest position the stove contains.

SOIL.—The following compost will suit it:—Two parts loam, two parts peat or turfy heath-mould, one part decayed leaves, and a half-part of rotten hotbed dung. Mix well together without sifting, and throw in amongst it a portion of broken pots, and a free addition of rough sand to keep it open. Place under the soil three or four inches of drainage, which may be broken pots, or pieces of brick or sandstone, whichever may be convenient. In such a compost it will thrive for many years.

WATERING.—When growing freely, plenty of water should be given; and when there is a fear that the enriching qualities of the soil is exhausted, then an occasional watering of liquid-manure will be useful. After the bloom is over, during winter the soil should be allowed to become partially dry, to give a degree of rest to the plant. The heat in summer should be from 70° to 85°, and in winter, from 60° to 65°.

TRAINING AND PRUNING.—Climbers with twining shoots are somewhat difficult to train in any other way than twisting their yearly shoots round any support that comes in their way. In fact, if no such support offers itself, the shoots clasp round each other, and when they become old are frequently strangled; but by constant attention they may be tied out, and spread over any extent of roof. This *Ipomœa* more especially requires this attention, or its blossoms will, in a great measure, be smothered amongst the foliage. The shoots should be thinned by cutting away the most superfluous, or such as may not show flowers. When the blooming season is over, then a more severe pruning should take

place, and only the strongest branches left. This pruning is, indeed, necessary for all stove climbers, to keep them tidy and within bounds.

INSECTS.—This creeper is not much subject to the attacks of these disfigurers; but the red spider, where syringing is neglected, will sometimes attack the young leaves. Apply sulphur to the flues or pipes, and syringe the leaves freely. The mealy bug will also feed upon it, if on any other plants in the house. The best destructive is constantly destroying this bug with a stiffish brush; and if the expense is not considered, wash them with spirits of wine, which is instant death to them.

PROPAGATION.—It may be struck by cuttings, but they are weak and difficult to root; hence, nurserymen propagate it by grafting upon the *Ipomœa insignis*, and that is readily increased by cuttings. This grafting is done by making a cleft in the tuber, and slipping in a ripened scion, claying it over in the usual way, and plunging in a pot in a hotbed. Cuttings are struck by taking off young, stubby shoots, with a ripened heel to each, inserting them in a pot filled with the compost, and a layer of sand on the surface, covered with a bell-glass, and plunged in a brisk heat of 80°. Let the cultivator try this method, and if he succeeds in rooting half of the cuttings, he may consider his success a feather of honour in his cap.

T. APPLEBY.

THE VINEGAR PLANT.—At this season of the year, when salads are consumed to a great extent, it may be of advantage to your readers to know how to make vinegar with the Vinegar Plant. It is a well-known fact that much of the vinegar which is sold in the shops is either malt vinegar reduced with water, and strengthened with sulphuric acid, or pyroligneous acid diluted, or acetic acid also diluted, neither of which are very acceptable. Under these circumstances, it is a comfort to know that one can make their own vinegar, and know what is in it. Take one gallon of water, half-a-pound of sugar, half-a-pound of treacle, and boil them together for twenty minutes; when cool add a quarter-of-an ounce of German yeast, put the whole into a jar, and lay the plant on the surface of the liquor. Cover the jar with paper, keeping it in a warm place, and it will produce very good and wholesome vinegar in about six weeks.—C. P., Kensington.

SUMMER POSITION FOR CAMELLIAS.

"My plants have finished blooming; shall I keep them in the greenhouse during the most of summer, or place them in a forcing-house, or stove-house for plants, &c.?" If kept in a greenhouse, try and treat them to a place for themselves, where they can be kept closer, moister, and warmer, as recommended for Azaleas. There they will grow and set their buds nicely; but you must not expect early bloom. In other words, instead of bloom in December and onwards, you must be satisfied with it in February, March, and onwards. When growing, there is not a forcing-house, or stove plant-house, but will suit the Camellia; but the plants subjected to such an increase of temperature should stand at a considerable distance from the glass, or be shaded a little from the fierceness of the sun's rays. For this purpose, the Camellias rejoice in a house where Vines are trained some four feet or so apart. When the young shoots have elongated sufficiently to show a prominent bud

getting a little hard at the points, the plants should have more air and light gradually; and finally, so far as these privileged plants are concerned, they will ultimately be the better of six weeks or two months in the open air, in a shady place, before housing in October. The buds should be getting prominent before the plants receive their summer quarters. Those receiving the hothouse treatment early will come naturally into bloom during the darkest and dullest months of the year.

R. FISH.

SALE OF ORCHIDS.—There was a large collection of Orchids offered for sale by auction, at Mr. Stevens's Sale Rooms, King-street, Covent Garden, on the 4th inst. There were two parcels, one consisting of East Indian, and the other Brazilian. Among the latter there was a fine specimen of *Cattleya Leopoldii* sold for £1 10s., and other £2 10s. A large mass of *Cattleya amethystina*, £1 10s., and another of the same fetched £1 13s. A new species of *Cattleya*, £2. *Laelia purpurata*, £2. Of the East Indian, *Aërides*, Fox-brush species, a fine plant, brought £2 17s. 6d., another of the same, £2 8s., and a third £3. *Saccolabium rubrum*, £2 17s. 6d., £2 8s., and £2 4s. *Dendrobium aggregatum major*, £1 6s., and £1 2s. *Vanda*, new species, with yellow flowers, £2 15s., £1 16s., £1 12s., and £1 10s.

NOTES TAKEN AT MOOR PARK,

THE SEAT OF LORD ROBERT GROVESNOR, NEAR
WATFORD, HERTS.

I DESCRIBED at page 145, a fine specimen of *Medinilla magnifica* that I saw at this place, and I find, on referring to my Note Book, a few more jottings made there at the same time, which I think will be useful.

Moor Park is a place of considerable extent. The mansion stands on a platform on the side of the hill, and commands some beautiful views. The town of Watford is seen about six miles off, and the fine ancient tower of the church is a fine object, rising a considerable height above the tile-roofed houses. Looking in another direction, Stanmore Priory, late the seat of the Marquis of Abercorn, forms a beautiful landscape. A third fine view to the west shows the hills beyond Edgware, covered with beautiful woods. The Park itself is well-wooded; but many trees have been cut down, and even considerable hills lowered, to open out these distant fine views.

This place has frequently changed owners. It once belonged to the unfortunate Duke of Monmouth, who, as is well-known, was beheaded for high treason in the reign of James the Second. There is a tradition, that when he was beheaded, his Duchess, in the frenzy of her grief, ordered a considerable number of the fine Oaks, with which the Park abounded, to be beheaded also. Such is the tradition current to this day amongst the peasantry in the neighbourhood. It is, however, doubted by the better-informed; but one fact is certain, the tops of the Oaks in question must have been cut off about that time, according to the growth they have made since, and it has rendered them very picturesque objects, though, of course, the timber is thereby greatly injured.

One of them is a very curious object. The cutting off the head of the Oak caused the centre to decay, and a Beech nut having fallen upon the centre, or been carried there by a squirrel, it put forth roots, and grew, and is

now a stately tree; the Oak continuing alive on one side. The roots of the Beech evidently have run down the centre of the Oak, and reached the ground, which now supports the tree. One side of the trunk of the Oak is quite gone, laying bare the roots of the Beech; but the other side stoutly contests the place with the Beech, and the Oak continues to live and put forth branches and leaves. They look like two mighty wrestlers, pressing each other in close embrace, but neither as yet able to throw down his antagonist. The two form the most curious and interesting object in tree-growth I ever saw in all my travels.

About a quarter of a mile from the house to the right, there is a portion of ground kept for pleasure. In ancient days, I have no doubt this place was the Pleasance, or Wilderness. It is considerably elevated, and there is a kind of Temple to sit down in. In this pleasure-ground I noticed some fine specimen trees, especially a very lofty Spruce Fir. The branches of this tree have crept on the ground, taken root, and sent stems rivalling the parent one, forming a pillared shade. It appears, when close to the main trunk, something like a lofty cathedral, with its pillars and arches; hence, it has been named "St. Paul's."

Passing on past this venerable evergreen tree, we come to a small grove of *Larches* of most extraordinary altitude, and "as straight and tall as a poplar tree." They exceed 100 feet high, with beautiful clean trunks. There are also some very large *Scotch Firs* with their dark foliage, giving quite a character to the scene. The *Weymouth Pine* here towers up to an immense height. A hillock nearer the house pleased me much. It had been planted some seventy or eighty years ago with a circle of *Yews*, and a centre of *Scotch Firs*. The *Yews*, now, are about twenty feet high, and the *Firs* fifty. The former forms a dense mass, hiding or concealing the *Fir*-stems, and thus forming a very fine and striking object.

A considerable portion of the pleasure-ground to the left of the mansion is laid out as an arboretum for *Coniferae*, and there are some fine young *Deodars*, *Araucarias*, &c., planted, which have not suffered at all during the late severe winter. This part of the ground is bounded by a wall of considerable height, and just within it, and nearly level with the top is a broad, straight terrace-walk, six hundred feet long. This is a very pleasant elevated promenade; but my space is becoming small, and, therefore, I must leave the Park and the Pleasance rather abruptly, and glance at the gardens.

FLOWER GARDEN.—This is on the east front of the house, and was designed by Mr. Nesfield many years ago, and is, I consider, one of his best. It is in the Italian style, and, therefore, corresponds admirably with the mansion. A large quantity of dwarf evergreens are kept by Mr. Sparrow on a west border outside the kitchen-garden. These are taken up and planted in the beds during the winter, and are removed in spring, and put in the border during the summer. The beds are now planted with the usual bedding-out plants. This is a plan that I have many times recommended in *THE COTTAGE GARDENER* as being a great improvement. The flower-garden is thus attractive both in winter and summer. In order to give effect, the evergreens are chosen with leaves of different colours. One bed is planted with *Aucubas*, another with *Laurustinus*, a third with variegated *Hollies*, a fourth with small *Yews*, and so on. The effect must be good, though I confess I never saw this place when the dwarf shrubs were in the beds. This plan, though rather troublesome and expensive at first, is greatly preferable to naked beds of earth, which the generality of our flower-gardens, where the bedding-out system is carried out to a great extent, present. The Crystal Palace, at Sydenham, is an

example in point, and as it is, or ought to be, a pattern of the highest character in flower-gardening, I think Sir Joseph Paxton would add to the interest of the grounds in winter if such a furnishing of the flower-beds in winter was adopted.

I have some notes on the kitchen and fruit gardening department at Moor Park, which I must defer, for want of space, to a future opportunity.

T. APPLEBY.

MISTAKES.

ALL are liable to these. One advantage in a periodical work is, that the error of one week may be notified in the next, or one not far off. I should feel pleased if I escaped committing errors altogether; my next degree of happiness would be found in having mistakes pointed out and corrected. Sometimes, the altering of one word, or one letter, completely destroys the sense; and when that happens, it is less the fault of the printer than the hasty scribbling which they are under the necessity of deciphering. I take this opportunity of referring to two or three general mistakes.

TREE MIGNONETTE AT NORTHAMPTON SHOW.—“Allow me to correct a mistake, &c. The Tree Mignonette is not a different species from the common variety, &c.—L. S. C.,” page 150. Turn to page 108,—and though there are errors in that article previously referred to,—there is no mention made of the sort of Mignonette sent out by Mr. Henderson as a *different species*. I have no doubt that “L. S. C.” thought this to be the case, and I feel obliged even for the desire to correct an error, though in this case it did not exist. The context would show the plants were not grown in the tree style, but in the usual one of bushes; and though the mode of growth would do much, the appearance of the best plants would almost indicate that though not a *different species*, they belonged to a different variety of Mignonette from the others. I see nothing opposed to theory, or practice, in obtaining and retaining a superior variety of Mignonette, any more than I should be incredulous as to a superior sort or variety of Cabbage. A distinct species is quite a different affair.

R. FISH.

LYING AND LAYING.—Will you allow me to make a suggestion, which I think will be useful to the conductors of the press in general, and especially to their reporters and not a few of their correspondents, who ought to feel a common obligation to preserve their mother tongue in all its purity and precision? It is this:—“Hens *lay*, but they do not *lie*. Hens *sit*, but they do not *set*. You can *set* a hen, if she is inclined to *sit*; but you cannot make her *set*.” Again:—“Ships may *lie* at anchor or at a wharf, but they do not *lay* in either of those situations. Those on board may *set* sail, but they cannot *sit* sail.” Attention to these suggestions seems to be demanded by the fact, that scarcely a day passes without instances of the great misuse of the above-mentioned verbs, in some of the papers, and occasionally in books. Let it be remarked, that *Lay* and *Set* are active or transitive verbs, and must always have an object, expressed or understood. *Lie* and *Sit* are neuter or intransitive, and therefore do not admit of an object. The only real difficulty arises from the fact, that the Past Tense of “*Lie*,” when used without an auxiliary, is the same as the Present of “*Lay*.” But a little attention will obviate this. Query—Does the ship, when “close hauled,” *lay* or *lie* near the wind? And when

“brought to” in a gale, does she “*lay* or *lie* to?” Again,—When she *sets* sail, does she get under “*way*” or *weigh*? and what is the true origin of this technical phrase? Though every writer is not required to be an expert in nautical phraseology, he is bound to use correct English.—*New York Observer*.

GARDENING FOR THE MANY.

FLOWER GARDENING.

THE limited space here allotted to flower-beds renders it advisable not to extend the collection too far; nevertheless, it is wonderful how many plants a really good contriver will manage to grow in a small place—due regard being had to the useful maxim of “having everything in its right place.”

A Dahlia, Hollyhock, or other tall plant, should never stand near the edge, unless it be in a bed or border devoted entirely to that kind of plant, which is hardly expected in the small front garden of a villa, while some of the low spreading ones ought to be but sparingly cultivated at all, unless there be special reasons for doing so; for, be it remembered, the flower-beds of the amateur are expected to look neat and orderly at all times; therefore, all plants which look untidy for a long time ought to be avoided as far as possible. For instance, bulbs which flower early in spring, and are on that account valuable, look sadly until their leaves die down in summer; and it is not prudent to cut them off, for so long as they remain on, they have a function to perform necessary to the plant's welfare. Tying up the decaying foliage is better than cutting them off, while carefully taking them up and replanting them in some other suitable place to ripen is best of all; not that the bulbs gain anything by the change, but that the ground we expect is made tidy by their absence. But some plants are averse to change, as the *Winter Aconite* and *Christmas Rose*, both of which are indispensable, as being the very earliest flowers we have; in fact, there are few flowering plants that like to be moved every year, although some like a change occasionally; but as the whole of the beds in an amateur's front garden are under the eye of the occupant of the house, it would be better if nothing was introduced there but what would look well at all seasons. Some plants always look well, whether in flower or not—*Auricula*, for instance; while the stocky habit of *Catchfly*, *Double Rocket*, *Scarlet Lychnis*, *Phlox*, *Yellow Alyssum*, and some others, are never untidy-looking, or at least need not be so. A look over the beds will at once tell the most useful that way; and these had better be increased to the required extent. The season is now favourable for increase by cuttings. Now, in the list of plants having disorderly habits, many of the most showy annuals may be classed—*Eschscholtzia Californica* for one, and even *Convolvulus*, and many others; while some are compact and beautiful, as the *German Stock*, *China Asters*, *Saponaria Calabrica*, *Rockets*, *Larkspurs*, &c. Patches of these may, therefore, be introduced with perfect propriety amongst the mixed flowering plants which it is supposed the amateur's beds are filled with; and as many annuals plant pretty well, it is easy to place them where they are wanted. Some certainly do not plant very well, as *Larkspur* and *Mignonette*—these had better be sown when wanted, and thinned out in proper time.

All tying up must be done that is absolutely necessary, but not more; for if a plant will support itself it is much better in that condition than when assisted by any artificial means. Pegging down is hardly required in beds of a mixed kind, as the planting ought to deter-

mine the proper place for each plant according to its height, and a little departure now and then from a strict line is useful rather than otherwise. Sow certain seeds of perennial flowers that were omitted last month, but be sure not to delay them longer than the beginning of the present one, otherwise they will not have time to become large enough to plant out and flower strongly next year.

Keep a sharp look-out on the *Roses* which may have been afflicted with insect; where so, there is no better plan than rubbing the shoot through the hand, having a basin with tobacco-liquor in it in the other, into which introduce the point of the shoot, and draw the wet hand along it.

Budding of Roses may now be performed; but this is less extensively practised than it was ten years ago, as the taste for having *Roses* on their own roots has become more general, and standard *Roses* are more sparingly planted than formerly: however, a few are necessary adjuncts to a small garden, as they occupy only a small space, and when planted in beds, their naked stems can be clothed in summer with something that is ornamental. If they be tall, a few plants of *Maurandia Barclayana*, or a *Lophospermum scandens* will do; the tall *Convolvulus* will be too rambling if the ground be good, which it is expected to be, having such heavy cropping to undergo; and, in fact, its powers that way must be supported by something in the liquid state, nothing being better than the droppings of sheep soaked in water, which gives vigour to the plants; but as this cannot always be had in the outskirts of a town, guano-water may be given stronger than that recommended for potted plants, and I have no doubt but the benefit will be perceptible.

It is right here to mention that too much crowding ought to be avoided, and plants only put in where they have a chance to flourish—they must not be crammed in merely for the sake of saying the cultivator possesses such and such plants. A robust, fast-growing plant must not be allowed to usurp more than its allotted space; but a delicate, slow-growing one ought not to be a near neighbour to it; and as all plants derive their support from the root as well as from above, the rambling robbers must be snubbed below as well as above, by a spade being thrust down a little way from them on all sides, or especially on the side next the plant it is destined to favour. This "cutting round" severs the roots, and before the plant can send a fresh supply in the direction of the weak plant, it is likely out of danger; but many plants are improved by thus curtailing their feeding-ground, and from a gross habit they begin to assume a more compact one, and flower better.

It is needless here particularizing the various beds forming the front-garden of our worthy correspondent, whose inquiries first called into notice the subject of "Gardening for the Many;" suffice it to say, that the present is not the season for making any great alteration in that department, neither is there much to sow or plant in that way, save what is stated above. Propagating *Pinks*, *Carnations*, *Pansies*, and *Double Wallflowers*, and many other plants, by cuttings, may be proceeded with, and some budding done; but as the great mass of the planting for the current season is over, we will suppose that the routine work of mowing the grass, hoeing and raking the borders, and rolling and clearing the walks, and the other work calculated to give effect to a flourishing vegetation, will be pursued with increased vigour, and the general air of neatness which pervades the whole will add much to the pleasure of the observer.

J. ROBSON.

POTTING ROSES FOR LARGE PLANTS IN POTS.

MR. BEATON referred, the other week, to Mr. Busby's *Roses*, and I felt certain that they would sustain the description of them I gave lately. I allude to them here for correcting an omission in the late article on growing *Roses* in pots, and to which Mr. Busby kindly drew my attention. Almost every word that is said upon *Potting* refers to growing the plants while in a young state, so as to get them forward; but, unfortunately, it was omitted to state the best time when to pot large, established plants; and that is best done in the autumn, early enough to allow the roots to penetrate the soil before the winter, and late enough not to give the wood the slightest check in performing the operation. The degree of maturity of the wood must therefore be some guide as to the time of potting. In large plants, much is not done to the ball, if at all in good condition. The drainage is well examined, or rather, fresh drainage is placed in a clean pot, a little of the old soil picked away from the ball, and then the plant is placed in a similar-sized pot, or one a size larger, and the new compost trundled in and well firmed, so as not to hurt the fibres. The omission I wish to amend is,—that autumn is the period for doing this with established plants. R. FISH.

CUCUMBERS AT WHITTLEBURY.

SPEAKING of cuttings received (p. 145), the expression occurs, "The *bug* did for them." This would be sufficient to conjure up ideas of the *bug revelling* at one of two places—all from transposing one letter. Change *bug* to *bag*, and the matter is clear enough. They got jumbled and heated in a small bag, along with other things. Had I made use of the crown of my hat, as in olden times, the cuttings would most likely have been good plants now. R. FISH.

NOTES FROM PARIS.—No. 13.

THE weather for some days has been showery and somewhat cold; but since the middle of May we have had a good share of sunshine, though not much at a time, and everything now wears the aspect of summer, both in the capital and in the country.

The flower-gardens of the *Tulleries* were, perhaps, never so beautiful as they are now, though the borders are only filled with the old homely kinds of herbaceous plants. It is somewhat singular that the French people have not yet got anything better than the common *Lilac* to give effect to their public gardens and pleasure grounds. It is usually trained on a stem of two or three feet, in the same style as *Waterer's* standard *Rhododendrons*; and at present, whether in town or country, *Lilac* is the only thing that strikes the eye among flowers. *Roses* are gradually making way, but *Fuchsias*, *Petunias*, *Cinerarias*, *Tulips*, *Violets*, *Wallflowers*, and *Narcissuses*, still take the lead among smaller border-flowers. *Pæonies* have been from the beginning of May somewhat plentiful, and one or two fine new varieties have been exhibited in the *Champs Elysées*. The greater number of the houses in Paris have been scraped, or whitewashed, this spring, and now, to make their *allure* more complete, the balconies have been filled with an extra supply of flowering-plants in pots. I think it is only in Paris we can see window-gardening properly carried out. In the first place, the houses are remarkable for their strength and solidity, and they all take a sloping direction towards the top. In the next place, in no other large town, or capital, which I have visited, are the balconies so numerous; and what particularly deserves notice is, that here the balconies are always the largest at and near the top of the house, where they may be generally seen rising above one another like so many terraces, loaded with plants and flowers, even to the sixth and seventh story. In the summer, or as soon

as the weather is a little warm, these elevated terraces form an agreeable lounge for the *locataires* and their friends, and are not unfrequently turned into what we would call tea-gardens. When much exposed to the sun, they are covered with an ornamental trellis, and *Cobea scandens*, *Clematis*, *magnolias*, and *Indian Cress*, soon form a welcome shade. Anywhere in Paris, but especially along the Quays and the Boulevards, the tops of the houses may be seen utilised in this way,

"Contrived a double debt to pay,"

like the bed in Goldsmith's Village Inn; that is to say, besides being a roof to the house, or nearly so, the terrace often serves as a tea-garden in miniature, and also as a *salle à manger* in the cool of the evening.

In a former communication, I mentioned the project of ornamental ground in front of the *Palais de l'Industrie*, and as it has been carried out, I may just shortly notice the result. The ground at the centre immediately in front of the building is taken up with the offices required by the commissioners, and through which the public pass; but towards the right and left a strip of ground has been enclosed with a low fence, and laid out as a garden, each having a basin in the centre, and I understand it is the intention to have a fountain in each basin by-and-by. The ground is chiefly in grass, and it gradually falls towards the basin. The whole is remarkably simple in design, and both plots were finished in about six weeks. As soon as the borders were ready they were planted with a rich assortment of bedding-out things, which have greatly improved during the last fifteen days, and much increase the general effect of the exterior, where so much has otherwise been done—and done well—to have the approaches and vicinity in keeping with the *Palais*.

Not the least interesting objects at present to be seen in the neighbourhood of the Tulleries are the fine, old Orange-trees, which line the long avenues of the garden, and which, when in flower, must form an exhibition worth making some sacrifice to see. Most of these trees are at least two hundred years old, and they have been in the open air for the last month. At one side of the garden a spacious building, like a church, erected for the purpose, affords them shelter during the winter. The garden of the Luxembourg is also well supplied in this way. Indeed, every garden of any pretensions here has its collections of Orange-trees, but the best and oldest specimens are to be seen at the Luxembourg and the Tulleries.

What was formerly one of the most wretched and filthy quarters in all Paris, will shortly be turned into a promenade and ornamental ground. The "Tour St. Jacques," a noble ruin, has lately had its foundations repaired. The hovels that covered the ground near it have been demolished, and an enclosure something like our English square will be formed round it in a few weeks more. The trees have been planted for more than six months, and they are now well-established. A magnificent Boulevard, with a line of trees on each side, will extend from this point, north and south, nearly the whole length of the capital. This is to be called the "*Boulevard du Centre*," and will be a continuation of the "*Boulevard de Strasbourg*," which was only opened last year. The trees in this part of the capital are chiefly Alders; and though put into the ground as mere pollards only eighteen months ago, they have now fine branchy heads six and seven feet through.

The markets are at present supplied with early vegetables, and even Cherries and Strawberries are plentiful. Asparagus, Lettuces, Radishes, and Onions have been for some time in great abundance. Green Peas, Artichokes, young Potatoes, and French Beans, are also cheap enough to be within the reach of all those who are in the habit of dining on two and three francs.

According to the best accounts, the crops both of the garden and field are likely to be very abundant this year in France: that of fruit, in particular, promises well. But in Paris butchers' meat is dear, and bread has just been raised again.—K.

DISEASES OF POULTRY.

SUDDEN DEATHS FROM EXPOSURE TO COLD.

THE severely unseasonable weather that has but lately disappeared has furnished me with an unusual number of cases of almost sudden death from violent and rapid inflammation of the lungs or heart. As an example of the cause and progress of these diseases, I may mention one case in my own stock, that of a healthy, robust cock, who, being accidentally shut out of his usual roosting-place, slept one night in a shed open to the north. The next morning he appeared as well as usual, but at midday was picked up dead. On making a post-mortem examination, I found that he had died of inflammation of the heart.

Mr. Punchard forwarded to me, during the severe weather, two magnificent Cochin cocks that had died suddenly, and in an apparently mysterious manner: both were in the best possible condition—all the organs, except those attacked with inflammation, being in the most healthy state; one, however, died from inflammation of the heart, the heart purse containing nearly a wine-glass full of fluid, the result of inflammatory action; and the other, from violent and very rapid inflammation of the lungs. Previous to this spring, I do not recollect seeing so many suddenly fatal cases of inflammation; this prevalence I attribute to the severe cold and easterly winds.

The practical inference to be drawn from the fact, is the necessity of protecting fowls from exposure to cold north-easterly winds at night; and this is the more important, as these rapid attacks run to a fatal termination almost before their presence is ever suspected, and, consequently, remedial measures are of no avail.—W. B. TEGETMEIER, *Wood Green, Tottenham*.

MOWING MACHINES.

HAVING seen "A. P.'s" enquiries about Lawn Mowing Machines, I send you the result of my own experience with Samuelson's Registered Lawn Mower. It answers much better than others in this neighbourhood, made by different manufacturers. Our's is twenty-two inches wide, and requires two strong men to use it; but those two can do as much mowing in eight hours with the machine as they could in eighteen hours with the scythe, not including sweeping, which takes nearly as long. Besides, the machine cuts well when the grass is dry, and can be used during any time of the day.—F. H. C., *Gardener, Grove House, Lymington*.

ON PROFITABLE RABBIT KEEPING.

THE amount of favour with which my writings on Poultry have been received, has, I am confident, been owing entirely to the fact, that I have always endeavoured to show the manifest advantage of treating fowls, as far as possible, in a natural, as opposed to an artificial, manner; and my success in rearing has certainly been much greater than that of many persons. As an example, I may mention, that out of the large number of chicken hatched this year, I have lost only two from disease, if I except a hatch from purchased eggs, the whole of which died from constitutional weakness, arising, doubtless, from the parents having been long confined to a very small run. In Rabbit keeping, also, I have been guided not by books, but by a reference to nature only; and although I do not profess to have much knowledge on the point of fancy rabbits, I find that I can breed large, healthy animals for the table at literally no cost at all.

In a state of nature, rabbits are animals enjoying a large, free range, taking much active exercise, residing in dry, sandy localities, feeding extensively on an unlimited supply of fresh vegetable food, and in the habit, when undisturbed, of basking in the sunshine. As usually kept, all these circumstances are reversed; they are immured in small, close hutches, where active exercise is impossible; these are frequently damp, and the animals are poisoned with the ammonia arising from their own manure; they are generally kept in dark, secluded places, debarred from sun-

light, and fed with a very limited quantity of fresh vegetables, the remainder of the food being oats, pollard, hay, &c.

Now, mark the result. In scarcely any instance do they repay their cost. When killed, their flesh is white, soft, and bloodless, compared to that of a warren rabbit, and very frequently they will be found diseased—white, scrofulous tubercles of the liver being especially frequent.

To show the result of an opposite mode of treatment, I took a large doe, which had been kept twelve months in an ordinary hutch, and fed with oats unlimited. I selected her, because all her previous offspring had tuberculous livers, and placed her in a dry out-house paved with flat tiles, with a south door closed with wire-work by day, fed with an unlimited supply of green food, and gave her daily a handful of waste hay, straw, or clover-chaff; under this treatment her dung, which was previously often soft, became hard and dry, her size increased, and she had strong, healthy litters, which were fed in precisely the same way; these grew rapidly, and were of undeniable excellence as table rabbits, being perfectly free from any scrofulous taint whatever.

The vegetables used as food were freshly gathered, and, of course, in rainy weather were given in a wet state. We are informed, even in the latest published books on rabbits, that wet herbage is poison to them, and that too much green meat causes the rot. This I believe to be the case when the animals are confined in hutches; but in open courts, or paved rooms, as described, I can testify, from experience, that they may be fed entirely on vegetables, and yet be in perfect health, as indicated amongst other signs by their firm, round, and solid dung.

I believe that a change of vegetables is absolutely essential. Where there is a large garden, the outer leaves and stumps of cabbage, brocoli, &c., may be the staple. Any of the labiate plants, as dead nettles, and the various sweet herbs, thyme, marjoram, &c.; parsley, celery, hog-weed, and a large number of umbelliferous plants; dandelion, sow-thistle, groundsel, and many of composite, chickweed, goose-grass, mallows; in fact, almost any garden or field vegetable, turnip-tops being the one for which they seem to care least. Grass, though last-named, is not the least valuable.

The quantity of green meat eaten by them when kept in this manner is enormous, being, I think, out of all proportion greater than that consumed by any other domestic animal; but it is all either refuse from the garden, or may be gathered from any hedgerow, and, unless a pig is kept, must be thrown away.

The liquid-manure they produce may be absorbed by dry mould, and, with the dung, makes a fertilising compost of great value, which will fully repay the trouble of attending to them.

There is one period at which, if more breeding does than one are kept, it is necessary to remove them into a separate hutch, or dwelling, namely, a week before and a fortnight after littering. The buck also must not be permitted to run at large, and young males must be killed, or removed, when three months old.

Let me beg any one who has the conveniences to try this plan. The daily cost of litter clover-chaff is a very small matter, compared with that of the oats and pollard usually employed, and the evidently increased happiness of the animals, as indicated by their gambols, and their luxurious basking in the sun, is in itself a sufficient motive with persons whose fondness for animals is not confined to those that appear on the dining-table.—W. B. TEGETMEIER, *Wood Grove, Tottenham.*

QUERIES AND ANSWERS.

GARDENING.

RAISING PRIMULAS FROM SEED.

"In an article in your paper of the 24th April, 1855, by Mr. Beaton, on Primulas, &c., he says, that being once run out of these flowers he wrote to Mr. Carter, and had a mixture from him, from which, next season, he had 5,000 blooming plants; but he does not say what course he pur-

sued as to sowing. Although very fond of such flowers, I have found it difficult to rear Auriculas and Polyanthuses in large quantities, having found them so fond of "fogging off," when quite small plants, that I should be glad to know how to raise these plants easily in some quantity, as I quite agree with Mr. Beaton's remarks on the beauty and variety of this tribe.—H. M. G."

[If "H. M. G." will read over those articles again, he will find his questions answered to the very letter. There is no more difficulty in raising a mixture of common border Auriculas and Polyanthuses from seed, than so much Spinach, although a more refined treatment was given to meet such cases as the present. Before "H. M. G." reads this, and orders his seeds, the season for sowing them will be over. It is of little use for him to sow such seeds after the 10th of June, unless he has the means of sheltering the seedlings during the winter. Mr. Carter's shop was "run" upon for these as soon as the thing was mentioned. Some bought sixpenny packets, and some took double the quantity. All the packets were ordered as mixed so-and-so—mixed border Auricula; mixed Polyanthus; mixed Cowslip; mixed Mountain Pinks; and mixed every seed named. A bed was prepared in the kitchen-garden, and the seeds were covered with sifted soil. A lady prepared all these things herself from THE COTTAGE GARDENER'S directions, and then sent for the writer to sow the seeds. There were twelve or fifteen kinds, all in mixtures, from the lists in THE COTTAGE GARDENER.]

EVERGREENS FOR A NORTH WALL.

"Required, the three best Evergreen Creepers for the north side of a house in south Derbyshire.—H. W."

[Buy *Ceanothus thyrsiflorus*, *Escalonia macrantha*, and *Cotoneaster microphylla*. All of them must be trained and nailed to the wall. We have no real Evergreen Creepers for a north wall, except Ivy.]

LIST OF VERBENAS, PETUNIAS, AND CALCEOLARIAS FOR BEDDING.—POTTING OFFSETS OF VALLOTA PURPUREA.

"I should feel greatly obliged if Mr. Beaton would kindly name a dozen or eighteen of the best *Verbenas* for bedding as a small selection, with their colours; also, six or more *Petunias*, and from eight to twelve *Calceolarias*. I send my present list, and shall be glad of Mr. Beaton's advice which to keep, and which to exchange for better, as well as what to add, but I have not room for many."

"VERBENAS.—Miller's Favourite, Mont Blanc, Walton's Emma, Emperor of China, St. Margaret, Defiance, Clotilde, Eclipse, Triumphant, King of Purples.

[Add Wonderful (from Turner), the best and nearest to blue; Mrs. Woodroff (from Henderson, Pine-Apple Place), a stronger variety of Defiance, with larger flowers; and Hellen, if you can get it a Mulberry, and you have the best we know.]

"PETUNIAS.—Milleri, Shrubland Rose, Shrubland White. [Add Prince Albert and *Devoniensis*.]

"CALCEOLARIAS.—Trentham Yellow. *Aurantia multiflora*. Golden Chain. *Amplexicaulis*. *Sulphurea splendens*. Sultan. *Phœbus*. Magnificent. *Shankleyana*."

[Add *Rugosa integrifolia* with Kentish Hero, and you will have all the best bedders of the family.]

"P.S. I have a number of fine offsets of *Vallota purpurea* round the old bulb, which is in a 7-inch pot; when should I remove them? and should I pot them singly, or three or four in a pot? and what size of pot in inches?—A SUBSCRIBER."

[We cannot recommend collections of any bedding-plants, as our lists would only entrap others who did not know better. Your own are among the very best, and except what we have marked, you cannot buy better ones. Every one ought to have the *Wonderful* Verbena from Mr. Turner, of Slough, who bought the stock, and showed it last summer. See for our account of it in the Index. Mrs. Woodroff is the largest scarlet Verbena flower we have seen; but we do not know the habit. It is an accidental seedling from

Robinson's Defiance, and is selling by Mr. Henderson of Pine-Apple Place.

Let the offsets on *Vallota* remain as they are till the end of next February, then put four or six of them in one pot. A 48-sized pot will do for three years to nurse them. Use nothing but good, sandy loam, and give them a great deal of water all the summer. Potting such slow-growing bulbs singly in pots very often ends in failure.]

THE FIRST SWARMS.

ON Saturday, May the 26th, I had a very fine swarm of bees left the hive, and after travelling over shrubs of every kind, several hundred yards, they went into my seed shop, and took complete possession, and Saturday, being market-day, they were no small nuisance to all my customers, for not one could enter the shop; at last, my shopman used the fumigating bellows, and expelled the bees with a double dose of tobacco. They afterwards settled outside the shop, and were put into a hive, and seem to be

going on well, but this cold weather is very much against them now.—J. S. HAYWOOD, *Wick Nursery, Worcester.*

ARRIVAL OF OUR SUMMER MIGRATORY BIRDS.

As you occasionally, in your Weekly Calendar, give the dates of arrival of some of our summer birds of passage, I enclose you a short document, which may prove interesting to many of your readers, if you consider it worth insertion in your publication. I can only say in its behalf, that it is compiled with the utmost care from my own actual observation. I have not in any instance trusted to others for information. I have great facilities here for recording the exact date of arrival of several of the birds; of the rest, more accidentally; but, however, I can guarantee for the truth of every date given. I have also added a supplementary table which may be interesting.—A. R., *Bromley Common, Kent.*

OBSERVATIONS FROM 1844 TO 1855 INCLUSIVE.

NAME.	1844.	1845.	1846.	1847.	1848.	1849.	1850.	1851.	1852.	1853.	1854.	1855.
Blackcap....	April 20	April 21	April 16	..	..	..	April 26	April 8	May 5	Apr.27	Apr.14	May 17
Chiffchaff ..	" 12	" 26	..	..	..	April 14	" 12	" 4	Apr. 9	" 10	" 1	Apr.14
Cuckoo	" 16	" 24	April 24	..	April 21	" 27	" 22	" 7	" 26	" 23	" 21	May 3
Flycatcher, common ..	May 8	May 25	May 15	May 15	..	..	May 11	May 28	May 10	May 20	May 27	" 28
Martin.....	..	" 1	" 1	" 8	May 3	May 15	" 9	April 22	Apr.28	" 4	Apr.29	" 16
Nightingale ..	April 16	April 20	April 13	April 19	April 18	April 14	April 11	..	" 21	Apr.24	" 16	Apr.17
Shrike, Red-backed ..	June 5	May 8	May 10	May 13	..	May 3	May 9	May 28	May 7	May 19	..	..
Swallow	April 18	April 6	April 26	April 26	April 12	April 27	April 24	April 11	Apr.16	Apr.12	" 15	" 21
Swift .....	..	May 25	May 10	May 21	May 17	..	..	..	..	..	May 13	..
Redstart	April 18	April 25	April 16	..	..	..	April 24	May 8	Apr.20	May 6	Apr.22	..
Turtle-dove ..	March 15	..	May 11	..	..	May 28	May 13	..	..	..	..	..
Whinchat ..	April 18	..	..	May 11	April 21	..	April 12	..	May 5	..	..	..
White-throat ..	" 19	April 21	April 14	..	" 18	May 2	May 2	April 23	" 1	Apr.26	Apr.27	Apr.21
Wry-neck ..	" 14	" 3	" 16	April 4	" 13	April 18	April 11	April 7	Apr. 4	" 16	" 7	" 28

SUPPLEMENTARY TABLE.

NAME.	Earliest Arrival.	Latest.	Difference.	Number of Observations.
Blackcap.....	April 14	May 5	21 days	Nine
Chiffchaff	" 1	April 26	25 "	Nine
Cuckoo	" 16	May 3	16 "	Eleven
Flycatcher, common	May 8	" 28	20 "	Ten
Martin.....	April 22	" 16	23 "	Eleven
Nightingale	" 11	April 24	14 "	Eleven
Shrike, Red-backed	May 3	June 5	32 "	Nine
Swallow	April 6	April 27	21 "	Twelve
Swift	May 10	May 25	15 "	Five
Redstart	April 16	" 8	22 "	Eight
Turtle-dove	May 11	" 28	17 "	Four
Whinchat	April 12	" 11	30 "	Five
White-throat	" 14	" 2	17 "	Eleven
Wry-neck	" 3	April 28	24 "	Twelve

[We are very much obliged by this interesting communication, and shall be obliged by any other notes on such subjects.—ED. C. G.]

MAPLE SUGAR TIME IN AMERICA.

OAK VALLEY, Feb. 26, 1855.

THERE are numerous flurries in the air to-day; buildings become indistinct; hills loom up dimly; it is the sifting of the sky that tries to hide, not darkly, but in *whiteness*, the out-door world, as if it would purify it.

There are also flurries of snow-birds—gentle, affectionate creatures—borne in the bosoms of the snow-clouds. They always go in flocks, as if afraid to be alone in the world.

Winter has decked them with his own white robe. How frosty they appear among the cattle of the barn-yard, as with rounded breasts they walk, a little company, in the same direction, and tame almost as the dung-hill fowls.

A whim starts them, with one accord, as if a secret thread held them—and away they are borne on the whisk of the storm, perhaps to return again with fine, faint voices to repeat their little march.

The day is verging upon the night, yet the wind is still busy, moving the shutters and clouding the air. It seems not like approaching evening, but as though the darkening stormy ocean were nearing. It will be another bitter night—of in-door festivity, out-door suffering—the poor must be denominated out-door.

And now I bethink me that it is nearly spring—only a day between us and March. Yet many a wintry day must be endured ere *Spring* will rejoice around us—the “wooning time,”

“When music, sweet music,
Sounds over the earth,
And one glad choral song
Greet the primrose’s birth;

“When the lark soars above
With its shrill matin strain,
And the shepherd-boy tunes
His reed-pipe on the plain.”

So sings Eliza Cook of an English spring.

Next morning, nine A. M.—The sky is blue, with thin fleeces passing quickly over it. There is a glittering whiteness in the new snow of last night that pains the sight; for this is the wane of February, a month by me more beloved than October the sober. The solar light is waxing strong. About noon the eaves will begin to drip; already there are dark signs of moisture on the roofs, and the sun as yet looks out only by turns.

Dear reader, whose eyes will follow these lines—did you ever look under the south eaves of humble, “wood-coloured”

buildings? If not, do so in this sun-glistening weather. You will see what past summers have been doing—summers of great heat. They have been scorching the clap-boards that they look brown—with other times. If the sun shines while you are looking, you will also see little waves of heated air climb up, and over the dry roof, thence to the infinite sky. This the sun does in February—kind, is it not?

The other day I went through a wood. Let me tell how I passed my time in idleness. Idleness is sometimes good—I don't mean absolute do-nothing. A man's mind while awake is always busy.

I walked among the long stems of the wood; it is a satisfaction to be surrounded by them. How fine a thought is in the bark of trees—what variety!—the smooth, white, dappled, deep-ribbed, as in the princely ash; red and mossy as in the Indian Hemlock when it crests a ridge. To me there is a "feeling" in the bark of trees—its roughness is so plain and humble, so hardy and useful, and away-from-the-city! And the trees never change the fashion of their garments.

Another thing. The snow was marked with many little tracks, which sometimes, not often, crossed each other—squirrel tracks, made by spry feet; hare tracks, and the straight line path of the ruffed grouse, where each foot is placed exactly before the other, connected by a nail slide. These tracks indicate the life of the winter woods. The chickadee gives expression to this life: it is drawn around the labour of the woodman, often interfering with his axe; a cheerful, chirping life there, seeking amid the tonic smell of the timber, its food; tugging most earnestly when it finds a plump worm in the wood.

"This is a wholesome exercise," I remarked to the chopper.

(Hems) "Yes, if your axe is good;" and he felt of the edge. The steel, marked by a line, was as blue as the sky which shone on it, and as polished as a mirror glinting another sun.

"That axe is Morris's make yet of Little Falls," he said; as if that were sufficient recommendation. The next moment the chips were flying a storm, to the no small danger of birds and by-standers.

There is a beauty in chopping; especially when an Ajax guides the edge. The axe is the civilizer of mankind. Ah, what grain-clouded fields does the eye skim over in summer! The axe did it. Look at the orchard, blossoming in spring, fruitful in autumn. The axe permitted it to grow on its clearing—the poor, plain axe, now worn and laid by, where it rusts unnoticed. It once had a keen eye that shone in the woods. You could hear its smart strokes following each other, and accumulating, till they burst forth one collected thunder-crash of the tree. It is a simple instrument—omnipresent—on the ocean—in the solitude of Robinson Crusoe; every one has it—any one can make a handle for it—any one can use it—but many do not like to use it.

February, the last day.—I visited my uncle's to-day. An old scene was re-enacted; buckets were brought from their musty nooks; steamed, and ranged, a multitude along the brook. The old kitchen was a scene—great kettles boiling, room smoky, barrels, buckets, and boys in the way—geese cackling, grimalkins furtively gliding by—and little Maud, fearing to be jostled, half screaming, "What boys—what confusion!" Out-door the great dome shone serenely blue, with a small wind, scarce felt, coming thence; eaves were hurrying; the brook was rushing—spreading beyond its bounds with its grey-colored snow water, threatening the world with inundation: the plain is already overcome; and this sound is the breaking up of the season. What noise! all life is astir; the air seems hollow and echoes distinctly. There is a watery look in the southern sky, threatening rain, which is seldom ever fulfilled. In the night it will probably rain.

A tapping in the distant woods. The sugaring season has commenced—glorious, old-fashioned, boyhood's time! Who cares for the toil—for the deep snow, crusted over! with the tall trees—daily growing taller as the snow lessens—rising, as of old, to the heaven of childhood; seeming like great brushes against the sky.

There is a bird—I have often heard it at night by the fire-light—that has a peculiarly sweet note. We used to

call it the "sugar-whistle." It would chirp all night and during the day. Many a time have I sat nights and divided the hours between it and the bubbling of the kettles, and the dripping of the spouts in the silence of a burning sky. Perhaps the next moment this clear blue sky was sifting the fine snow upon you, wetting your unmitten hands, getting, as you stooped, into your neck, your ears—but over again as soon as it came, with a brighter sky looking upon you.

I love the opening of the sugar season, when these fine siftings meet you often. There is the chink, chink of the tapper, as he wends his way from tree to tree, where soon the overflowing bucket breaks into thousand ripples the reflected blue of the sky. You know the delectable time has then commenced. Ah, the boyhood's, girlhood's time—for fair forms were there too—has fled; no, it is still among us, and our memory of its past is a sun that enlightens the present.

But still more animating is the close of the sap season, running into the real spring, when the snow is all gone, leaving, (before the first shower raises it) the forest floor smooth-pressed, each leaf in its place as the fall winds laid it. It is easy then to locomote in the woods, though a twig will now and then make you lift your pail, after spilling half the contents.

About this time you may expect dark risings of thunder clouds, whose distant rolls are sometimes mistook for the drumming of the partridge, and *vice versa*. This uncertainty between bird and sky is particularly impressive at night, when the earth, as well as the heavens, is black. You love the dark scene, for it is the genuine large-beaded shower that tells you better than all else what is coming after. The days are warm and weeping when the snow flurries are converted into rain; but the clear nights will still give us frost, and then there will follow another "sap-spell." Not yet do the buds enlarge, though the eye of the sugar boiler is often up turned to the maple branches, for when once the buds begin to sprout there is no more sugar coined—molasses then.

And now look out for your surprises. You walk along, and the *first* hepatica startles you. You are sure to stoop, and almost conclude you will spare the tender thing—because a firstling. How pitifully its eye pleads to be spared—a large, tender eye, seeming to hold a tear-drop hidden—but you pluck it, and feast on its little scent.

The next step in the approach of the flowers, there will be a miracle—a sudden apparition of dusky blades—the adder's tongue, crowding in myriads the knolls and copses of the forest. When you see its flowers, you see a pleasant sight—the beautiful erythronium! not to be outdone by any other American plant.

The day—a new one—has passed, so that the sun just touches the verge of the horizon, and the whole view, hills, buildings, sky, all is red with the light. The sun is bidding adieu to us, and goes to make happy other dominions. Already the roofs cease dripping, and icicles are forming. The dung-hill fowls, happy and disputing all day, are wending along with heads pointing coop-ward. Now is the heaven's dome clear, and round, and deeply infinite—blue at the zenith, while a rim of mild light glows around the circle of the horizon. There is a look in the domestic tableau (I note it as I look out) as if out-doors were washed—a kind of Saturday-afternoon-in-the-country look, when each uncarpeted floor and platform is scoured moistly clean, and the female folk are trim and neatly dressed with a Sabbath prospect in view.

Happy world! when earth, and heaven, and human heart are all worth living for, which makes us so wish again for the society of the departed—gone—gone!—alas—alas! There seems a wrong. It cannot—cannot be! Is it a dream after all? Oh, that it were a dream—this absence from one's side, not heart, thank Heaven! It seems to be an evil of the world that our happy moments should so take on sadness. But there is a sweetness in it.—F. G.

THE NATURAL HISTORY OF GUANO.

THE trade in Guano, which has been lately opened to the coast of Africa, has not only raised high hopes as to its bene-

ficial effects in improving agriculture, by affording an abundance of the richest manure, but on the commerce, and especially on the shipping interests of the country, it has already occasioned considerable improvement. Everything relating to it is, therefore, a matter of importance, and even the natural history of the article is something more than a mere matter of curiosity. Its name, it would appear, is of Peruvian derivation, and had been called, in the language of the natives, *Huano*, signifying, dung or manure; the Spaniards now name it *Guano* or *Guanar*.

The aborigines on the coast of Peru seem to have used guano from time immemorial as manure; and at the time of the European discovery of the country, strict laws had been enacted by the Incas to guard the islands in which it is found, and to punish even with death those who killed the sea-fowls from which it was derived. Much doubt was entertained for some time after being brought to this country, with regard to the origin of guano; the Spaniards early questioned that which seemed to have been clear to the inhabitants of Peru; but chemical examination, and other evidence, leave it no longer undetermined, that the enormous accumulations of this matter on sea-islands, in various localities, are nothing more than the droppings of the myriads of sea-fowls which inhabit them for the purposes of rest and incubation. Morrell has termed such associations of sea-fowl, "Rookeries," which is the common appellation given to them by the South Sea navigators. His description of one of the Falkland islands is very graphic, and as it is instructive, it is here, in substance, introduced. Those islands extend north and south from latitude 50 deg. 58 min. to 52 deg. 46 min. S.; and east and west from longitude 57 deg. 32 min. to 61 deg. 29 min. W. The feathered tribes, he remarks, are very numerous on the lonely isles in the Southern hemisphere, both in the South Seas and in the South Atlantic Ocean. Of penguins there are four kinds which resort to the Falkland Islands, viz:—the King, the Macaroni, the Jackass, and the Rookery penguin; but the most remarkable bird found on those shores is the penguin's intimate associate and most particular friend, the Albatross.

When a sufficient number of penguins, albatrosses, &c., are assembled on the shore, and a deliberate consultation on the subject has been held, they proceed to the execution of the grand purpose for which they select their favourite element. In the first place, they select a level piece of ground, often comprising an extent of four or five acres, as near the water as practicable, always preferring that which is the least encumbered with stones.

As soon as they are satisfied on this point, they proceed to lay out their plan, which they commence by tracing a well-defined parallelogram, of sufficient magnitude to accommodate the whole fraternity. One side of this square runs parallel with the water's edge, and is always left open; the other three sides are differently arranged.

These industrious feathered labourers next proceed to clear all the ground within the square from obstructions of every kind, picking up the stones in their bills and carefully depositing them outside of the lines before mentioned, they sometimes create a little wall on three sides of the rookery; within this range of stones and rubbish they form a pathway, quite smooth, six or eight feet in width. This is for a general promenade by day, and for the sentinels to patrol by night. The whole area is then laid out in little squares of equal sizes, formed by narrow paths, which cross each other at right angles, and which are also made very smooth; at each intersection of these paths an albatross constructs her nest, while in the centre of each little square is a penguin's nest, so that each albatross is surrounded by four penguins. In this regular manner the wide area is occupied by these feathered sojourners of different species, having at convenient distances, accommodations for other kinds of oceanic birds, such as the shag, or green cormorant, and another, which seamen call the nelly.

The penguin's nest is merely a slight excavation in the earth, just deep enough to prevent the egg rolling from its primitive position, while the albatross throws up a little mound of earth, grass, and shells, eight or ten inches high, and about the size of a water bucket, on the summit of which she forms her nest.

None of the nests in these rookeries are ever left

unoccupied for a single moment, until the eggs are hatched, and the young ones old enough to take care of themselves; male and female alternately relieving one another when in search of food. By this precaution they prevent the eggs being stolen by the other birds, which would be the case if left exposed, but which, nevertheless, must be often done, for it frequently happens that when the period of incubation is terminated, the young brood will consist of three or four different kinds of birds in one nest.

(To be continued.)

TRUE VALUE OF A FARM.

THERE is something in the owning a piece of ground which affects me as do the old ruins of England. I am free to confess that the value of a farm is not chiefly in its crops of cereal grain, its orchards of fruit, and in its herbs, but in those larger and more easily reaped harvests of associations, fancies, and dreamy broodings which it begets. From boyhood I have associated classical civic virtues and old heroic integrity with the soil. No one who has peopled his young brain with the fancies of Grecian mythology but comes to feel a certain magical fancy for the earth. The very smell of fresh-turned earth brings up as many dreams and visions of the country as sandal-wood does of Oriental scenes. At any rate, I feel, in walking under these trees and about their slopes, something of that enchantment of vague and mysterious glimpses of the past which I once felt about the ruins of Kenilworth Castle. For thousands of years this piece of ground hath wrought its tasks. Old slumberous forests used to darken it; innumerable deer have tramped across it; foxes have blinked through its bushes; and wolves have howled and growled as they pattered along its rustling leaves with empty maws. How many birds; how many flocks of pigeons, thousands of years ago; how many hawks dashing wildly among them; how many insects, nocturnal and diurnal; how many mailed bugs, and limber serpents, gliding among mossy stones, have had possession here before my day! It will not be long before I, too, shall be wasted and recordless as they.—*Henry Ward Beecher.*

TO CORRESPONDENTS.

WHITE POLAND WITH BLACK CREST.—*Mr. Tegetmeier* is desirous of communicating with the gentleman who recently enquired after a fowl of this variety, and would, therefore, feel obliged if he would say where a letter would reach him.—*Wood Green, Tottenham.*

BARRELLING PORK AND BEEF.—We shall be obliged if any of our readers, in reply to a query from "T. F. A.," will send us full and known good directions for this.

ORANGE WINE.—We shall be obliged by recipes for this, in answer to "Fanny" and others.

JASMINUM WALLICHIANUM (*A Subscriber*).—This is the *Jasminum pubigerum* of most botanists. It is yellow-flowered, and a native of Nepaul, whence it was introduced in 1827. A warm greenhouse suits it. Write to any of the London nurserymen who advertise in our pages.

NAMES OF PLANTS (*Rev. R. M. Evans*).—The yellow flower is *Cheiranthus alpinus*, a very pretty, desirable plant, and will survive the winter in warm, dry borders, or upon the rockery; but in low situations a few plants should be kept in pots for frame protection in the winter. It requires some attention yearly by the way of increasing it, either by cuttings, or by taking up the old plants after flowering, dividing them, and replanting them in new spots, as it soon tires of the same soil. The other specimen is plucked from the tip of some shoot or other in a young state, too imperfect for us to say what it really is. (*H. J.*)—Your plant is *Echium violaceum*. Buy "London's Encyclopædia of Plants," new edition. We do not know the price. We use pocket magnifiers, three in one case, cost about 4s.

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WEEKLY CALENDAR.

D M	D W	JUNE 19—25, 1855.	WEATHER NEAR LONDON IN 1853.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in Inches.						
19	Tu	Elater rufipes.	29.929—29.912	66—38	S.	—	44 a 3	18 a 8	11 44	5	0 52	170
20	W	QUEEN VICTORIA ACCESSION.	29.908—29.876	66—44	S.W.	—	44	18	11 57	6	1 5	171
21	Th	QUEEN VICTORIA PROCLAIMED.	30.030—30.008	67—46	S.W.	06	44	18	morn.	7	1 19	172
22	F	Sun's declinat., 23° 28' N.	30.077—30.067	72—59	S.W.	—	45	19	0 10	8	1 31	173
23	S	Dascillus cervinus.	30.139—30.103	77—52	S.W.	—	45	19	0 23	9	1 41	174
24	SUN	3 SUNDAY AFTER TRINITY.	30.159—30.078	77—52	S.W.	—	45	19	0 33	10	1 57	175
25	M	[MIDS. DAY. NAT. JN. BAP.	29.987—29.853	81—61	S.	01	45	19	0 45	11	2 10	176

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 72.8°, and 50.1°, respectively. The greatest heat, 93°, occurred on the 23rd, in 1846; and the lowest cold, 35°, on the 23rd, in 1851. During the period 108 days were fine, and on 88 rain fell.

THE question of the admission of Associates into the ENTOMOLOGICAL SOCIETY appears likely to raise considerable stir among the Members. Since the last Meeting, Mr. Stainton has circulated a printed letter headed—"Are we to have Associates?" And we understand that a series of resolutions on the subject has been brought forward in the Council, to which it would, however, be contrary to the ordinary etiquette of societies to allude in the present state of the question.

The June Meeting was held on the 3rd inst., John Curtis, Esq., F.L.S., President, being in the chair.

An extensive and very beautiful series of insects, selected from a very large collection recently found in India, was presented by S. P. Pratt, Esq. The species were evidently from Assam or Sylhet, and included many of the rare or hitherto unique specimens lately described by Messrs. Doubleday and Westwood, in the "Annals of Natural History," "The Genera of Diurnal Lepidoptera," "The Cabinet of Oriental Entomology," &c. The collection was especially rich in nocturnal Lepidoptera, many being very beautiful and new. There were also a considerable number of Micro-Lepidoptera, and not fewer than five species of *Pterophorus* (Plume Moths).

A certificate was read in favour of *Professor Pictet*, of Geneva, the distinguished author of various elaborate monographs on the Ephemeridæ, Phryganidæ, and Perlidæ, as one of the ten foreign honorary members proposed by the Council, in lieu of the late M. De Haan, of Leyden.

Her. Dohrn, the President of the Entomological Society of Stettin, was also elected a member of the Society, and *General Hearsey*, and several other gentlemen, recently elected, were formally admitted as members by the President.

Mr. Foxcroft sent for exhibition various interesting Coleoptera and Lepidoptera, collected in his excursion during the present spring, at Loch Raunoch, in Perthshire. Among the Beetles was the very rare *Deordrophagus crenatus* (one of the Cucujidæ); and among the Moths was the *Anarta Cordigera*, with specimens of its cocoon and chrysalis.

Mr. Samuel Stevens exhibited a specimen of the magnificent new Butterfly recently discovered by Mr. Wallace, in Borneo, and named in honour of the Rajah Brooke. It is of very large size, its wings of intense velvety black colour, with a row of large silky green spots, and a blood-red collar.

A note by Mr. D. Urban was read, relative to the cocoons of *Saturnia Cceropia*, a gigantic Moth, common in Canada, and which from their large size are very conspicuous, being found on twigs of various plants, especially the Maple and Choke Cherry, where, during the winter, they are easily observed when the trees have lost their leaves, and at which time it would be easy to collect them in vast quantities. The cocoon consists of a double case, the outer being very rough, and it was suggested that this species might be adopted and grown as a Silk Moth with great facility.

Mr. Curtis presented, on behalf of Mr. Spence, various interesting insects collected in Ceylon, by H. K. Thwaites, Esq., the curator of the Botanic Garden at Colombo, amongst which were specimens of a Beetle allied to *Polistychus*, which had been found with their larvæ in the nests of a small black species of Ant.

Mr. Curtis also exhibited specimens of the remarkable blind Beetle, *Langelandia Anophthalma*, collected in Paris by M. De la Zouzée.

A memoir of Mr. Newman was read, upon the ribs in the wings of insects, which have been regarded by various writers as nerves, tracheæ, ribs, or veins, but which Mr. Newman considered to be merely organs of support similar to those of the wings of Bats, or of the Flying Dragon. Mr. Newman's views were opposed by Messrs. Curtis, Westwood, and Waterhouse.

FERNS have long been popular plants—nor is their popularity confined to one class of society—and for this reason—whilst all Ferns are beautiful, some of them are so cheap as to be within the purchasing power of all, and others are so scarce and costly as to be worthy companions of all that is rich and rare among the gems of the Stove and Conservatory.

The popularity of Ferns, however, does not rest only upon their beauty and their price, for they have, as an additional cause for their ready access to the good graces of the cultivator, that there is scarcely any place in which Ferns of some genera refuse to grow. Most of them thrive best in the shade; others prefer the brightest light; a third group will live only on dry walls and chalky rocks; a fourth succeed nowhere, except in abundant moisture; a fifth revel in the freest air of the mountain top; and a sixth flourish verdantly for months, and even years, within the close confinement of a Wardian case.

Thus all purses and all situations — if neither the one nor the other are absolutely barren—can command a supply of Ferns; and as we have had many enquiries relative to those within the reach of the many, we purpose publishing a series of drawings and notes of and about

HARDY FERNS.

Our notes will not be a mass of dry technical terms, which only the palate of a mere botanical collector can relish, but will be a mingling of what we think will be interesting to all, whether derived from our own observations, or from the observations of others. Moreover, we shall endeavour to use terms which all can understand; for our object, especially, is to benefit and gratify those who love plain truths in plain words.

Ferns are flowerless plants with stems, yet in this country the leaves are far more strikingly developed than are the stems.

"In our Ferns," says Mr. Henfrey, "the stem is indeed occasionally erect, rising a few inches from the ground, and expanding its wide leaves (or *fronds*, as they are usually called) in a circle; but in a greater number it creeps along beneath the ground, being, in fact, a rhizome similar in the nature of its growth to that of the Sedges, and other flowering-plants. This rhizome bears small separate (adventitious) roots on the under side, while at intervals from the upper spring leaves, which, when young, are very pretty objects, being curled up in a kind of scroll, that gradually unrolls as they rise upward. The bodies which represent the seeds here (called *spores*) are usually produced in formations growing upon the backs of the leaves, and it is principally upon the mode of arrangement of these formations (called *sori*) that the classification of Ferns is founded.

"The common condition of the apparatus in which the spores are produced, may be described as follows:—On the backs of the leaves, round patches, or streaks, or lines running round the borders of the divisions, appear, which in a perfect state have a brown, powdery aspect. This appearance is concealed in many kinds, in the early stages, by a membranous cover enclosing the brown dust; when the spores are more advanced, these coverings (called *indusia*) become either wholly or partly detached, and if examined with a magnifying glass, are found to have peculiar forms in different kinds of Ferns, and to be attached sometimes by little stalks, and sometimes by their edges. If we place some of the brown dust-like substance under a microscope, we find it to consist of a number of little cases, which, when ripe, burst, and discharge the very minute spores which have been produced within them. The bursting of the cases results from the elasticity of a kind of thickened band (the *annulus*), which extends around the membranous case, or *spore-fruit* (*theca*). The spores are mostly so small as to be invisible singly, to the naked eye, and consist of single vesicles of various shapes, often beautifully ornamented with markings on the exterior.

"Some Ferns bear their spore-fruits in a somewhat different way. In the *Osmunda*, or Royal Fern, the division forming the end of the leaf consists of a spike covered with capsules (spore-fruits), which differ slightly from those above described. In the Adder's-tongue and Moonwort, the spores are produced in fronds (called fertile fronds), which are quite changed in character for this purpose, and appear like spiked inflorescences. These three last kinds are sometimes wrongly called Flowering Ferns.

"In germination, the *spore*, which is a mere vesicle and not a miniature plant, such as we find in a *seed*, grows and divides into a number of vesicles, which multiply and enlarge until they form a minute green, leaf-like patch, and from the surface of this the first leaf arises, as it does from the *plumule*, or terminal bud of the embryo in the flowering-plants."

"The root of the tribe of Ferns," observes Mr. Keith, "assumes a great variety of different aspects in different species. In *Botrychium Lunaria* it is fibrous; in *Aspidium dilatatum* it is tuberous; and in *Polypodium vulgare* it is creeping and covered with scales. In *Pteris aquilina*, or Common Brakes, it is sometimes described as being spindle-shaped: yet this is not strictly the fact. If a frond is taken and pulled up with the hand, the portion of it is indeed spindle-shaped; but the real root, or rather rhizoma, or root-stock, from which you have thus detached the frond, remains still in the soil, elongating in a horizontal direction at the depth of from three to four inches, sometimes simple and sometimes branched, but always furnished with lateral fibres.

"The *trunk* of Ferns—if trunk 'it can be called which trunk is none'—is a stipe supporting the frond; or rather the whole of the herbage is a *frond*—that is, an incorporation of stipe (or stem), leaf, and fructification. If the stipe of a Fern is cut open, it will be found to consist of a firm pulp or pith, interspersed with bundles of longitudinal fibres of a dusty brown colour, assuming an arrangement proper to the species. On a transverse section of the stipe of *Pteris aquilina* (Common Brake), taken a little above the surface of the soil, the divided extremities of the bundles exhibit a slight resemblance to an oak-tree in full leaf. This has been noticed even by the peasantry of the country, among whom it is known by the name of 'King Charles's Oak.' But if the section is taken in a slanting direction, then the resemblance exhibited is that of the Eagle of the Roman standard; whence we have the trivial name.

"It was for a long time believed that Ferns are destitute of *seeds*, and propagated nobody knows how. Yet no botanist of the present day doubts the reality of Fern-seed, or at the least of sporules from which new plants spring. Some have even fancied that they had detected the parts of the antecedent flower. But admitting that such detection is impracticable, the botanist can, at least, direct his attention to the mode of fructification, and to the fruit produced. In Ferns, strictly so called, it is dorsal,—that is, scattered in clusters or patches on the back of the frond. These patches are generally accompanied with an integument called the

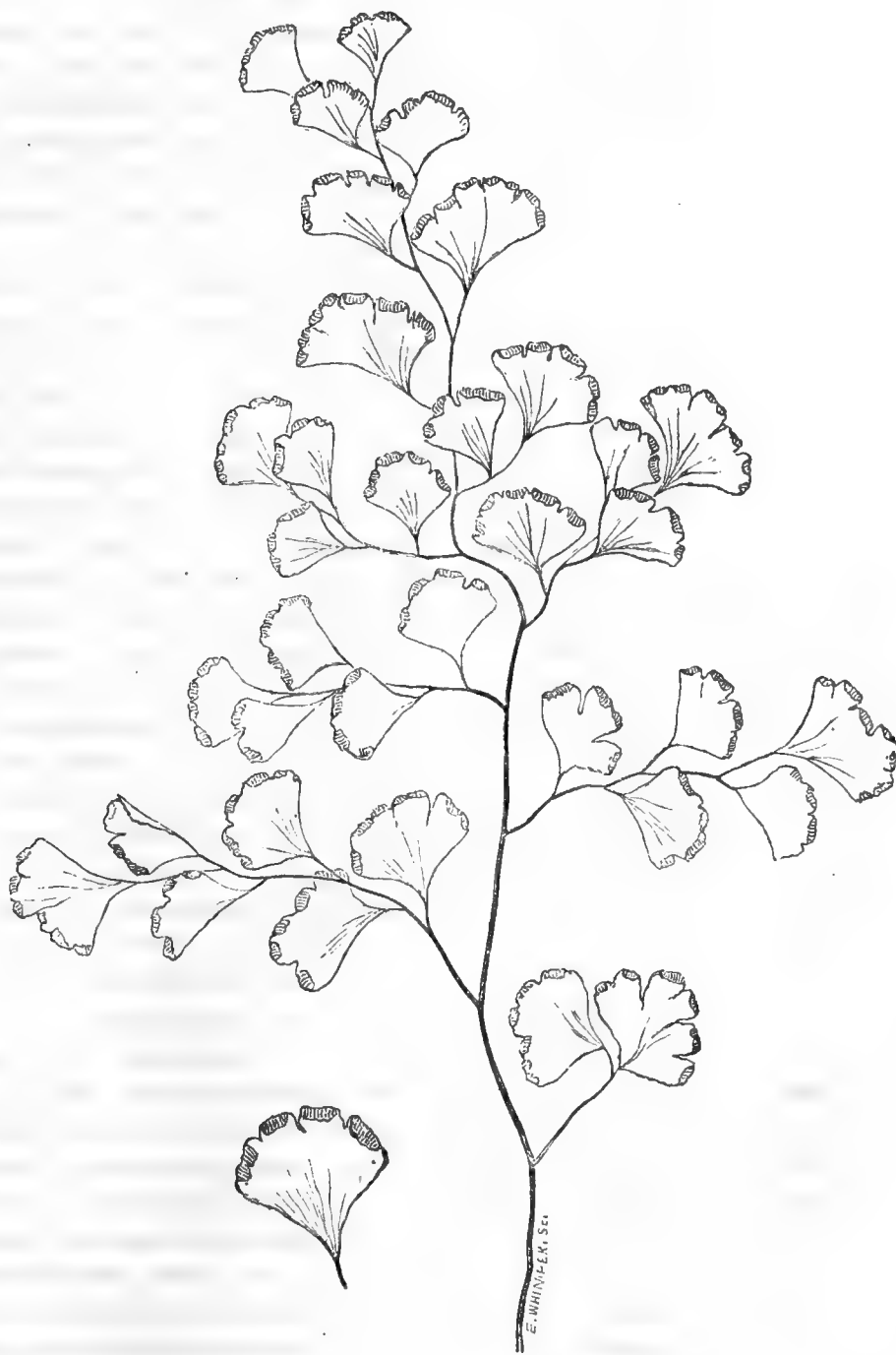
Indusium, which, at the period of the maturity of the seed, bursts open, sometimes towards the nerves and sometimes towards the margin, but in plants of a similar habit, uniformly in a similar manner. The merit of this discovery is due exclusively to Sir J. E. Smith, who found it to be a most decisive criterion for the determining of natural genera, and the only sure ground on which the botanist can rely. When this integument bursts, the fruit, now ripe, escapes, which is for the most part a capsule surrounded by an elastic and

jointed ring opening transversely, and discharging the enclosed seed or sporule, which is a small and minute globule, discoverable only by the microscope, and capable of giving origin to a new plant. Ferns were raised from the sowing of their seeds in 1789 by Mr. J. Lindsay, of Jamaica, as also by Mr. J. Fox, of Norwich, about the same time."

From that time Ferns began to obtain more notice from gardeners, and there is now no order of plants of which the propagation and culture are better understood.

ADIANTUM CAPILLUS VENERIS.*

(TRUE MAIDEN-HAIR FERN.)



This most elegant Fern was not known by our early botanists to be native of this country. Gerarde says, "The right Maiden-hair groweth upon walls, in stoney,

shadowy, and moist places near unto fountains, and where water dropeth. It is a stranger to England; notwithstanding I have heard it reported by some of

* We have often been asked if a complete list of Synonymes can be obtained. We publish the following, to show what even an incomplete one is:—

A. Capillus vulgaris. Linn. *Species Plantarum*, 1558. Linn. *Mat. Med.* ed. 2-226. Huds. *Fl. Anglica*, 460. Miller *Dict.* 1. Scopoli *Fl. Carn.* n. 1277. Bolt. *Fil.* 24. t. 29. Jacq. *Misc.* 11. p. 77. t. 7. Smith *Fl. Brit.* iii. p. 1138. Swartz. *Syn. Fil.* 124. Withering. *Arr.*

781. Huds. *Eng. Fl.* 243. Lightf. *Fl. Scot.* 679. Dicks. *Hort. Sicc.* fusc. 6. 16. Crantz *Inet.* i. 31, *A. petiolis ramosis, foliis flabelliformibus, lobatis.* Haller *Helv.* n. 1713. *A. foliis coriandri.* Bauhin. *Pin.* 355. Moris. *Hist.* iii. p. 587. s. 14. t. 5. f. 6. Tourn. *Inst.* 543. Tourn. *Ele. Bot.* 433. Linn. *Mat. Med.* ed. 1. 169. Alston *Tiro-Bot—Magnol. Bot. Mons* p. 4. *A. coriandrifolium.* Lamark. *Encyc.*

good credit, that it groweth in divers places of the west country of England." Parkinson had heard it "reported that it is found in Gloucestershire." Ray, in 1686, says, "it rarely or never occurs in England;" nor was it known for certainty that it is a native of this country until found by Mr. Ellwyd (Lloyd) at Barry Island and Porth Kirig, in Glamorganshire, about the year 1700, and it was first announced in the third edition of Ray's *Synopsis Methodica Stirpium Britannicarum* (vol. i. 123.), published in 1724.

Root black, scaly, and with wiry, fibrous rootlets. *Fronde*s usually six inches high, but under favourable culture twice that height; evergreen in sheltered situations, but usually dying in winter and reappearing in May. *Stipe*, or stem, of the frond, slender and dark purple, the lower half of its length without leaflets. The branches of the stem are very slender, and alternately on opposite sides of it, and the leaflets are similarly placed on the branches. *Leaflets* irregularly fan-shaped; the fertile leaflets deeply cut on their edges, and the barren leaflets sharply-toothed. They are all of a pale, semi-transparent, bright green colour, and having doubly-branched veins. The *fructification* forms a kind of margin to the lobes of the fertile leaflets, and when perfect in July becomes of a deep brown, as shown on the magnified leaflet in our drawing.

This Fern is of rare occurrence in this country, being found chiefly in our mildest and moistest districts, Devon, Cornwall, South Wales, and Ireland. It has been found, however, on the Islands of Arran, and on the banks of the Carron, in Scotland. Much more abundantly does it occur in the warmer countries of Europe, northern Africa, Asia, and North America.

Culture.—Although a native of Great Britain, yet it is only found here in moist, sheltered situations; and, therefore, it is useless to attempt to grow it upon ordinary rockwork in the open air. It requires to be cultivated under glass in a moist, moderately warm air. The soil it prefers is formed of limy rubbish, pebbles, and sand in equal proportions.

It is said, by Mr. Houlston and Mr. Moore, that in the warmer climate of the south of Europe, the Channel Islands, and Madeira, this Fern attains the height of eighteen inches, and is then called *Adiantum Moritzianum*; but our native plant, if cultivated in a moist stove with a high temperature, will produce fronds of magnitude equal to those from the south of Europe or Madeira, with which they are precisely identical.

Adiantum. Camer. Epit. 921. Matth. Comm. ii. 542. Fuchs. Hist. 82. Dod. Pempt. 469. Lobel. Ic. 809. Lobel. Obs. 471. Cod. Mid. iii. Turn. Hist.

A. magnum. Tragus Stirp. 53.

Adiantum sive *Capillus veneris*. Bauhin Hist. iii. p. 751. Raii. Hist. i. 117. Dalech. Lugd.

Adiantum. Cordus in Diosc.

Capillus veneris, vulgo *Adiantum album* Plinii. Cæsalp. de Plantis.

Capillus veneris verus. Ger. Herb. 982. Ger. Herb. em. 1143. Raii Syn. iii. 123.

Adiantum vulgare, *Capillus veneris*. Dale. Phar. 71.

Adiantum verum sive *Capillus veneris*. Park. Herb. 1049.

Adiantum fontanum. Gray. Arr. ii. 17.

Adiantum cuneifolium. Stokes in Bot. Mag. iv. 612.

Adiantum officinis, *Capillus veneris*. Rauwolf Hodoep. i. c. 4. p. 63.

Adiantum sive *Capillus veneris verus*. Lobel. Advers. 361.

Capillus porcinus. Avicennæ.

Adiantum gallicum. Bauhin in Matth.

USES.—In the days of the old herbalists the true Maiden-hair Fern was considered not only efficacious in many diseases, but especially potent in promoting length of tresses, and to this attributed power it owes its name, both among the Latins and the moderns. So succulent are the leaves, that under strong pressure they yield about three-fourths of their weight of juice. This juice gave the name to a well-known syrup—*Capillaire*. If this has any medicinal virtue it arises from the Orange-flower water forming one of its ingredients.

TO MAKE CAPILLAIRE.—Maidenhair leaves five ounces; Liquorice-root, peeled and sliced, two ounces; boiling-water five pints. Let them remain for six hours; strain, and then add thirteen pounds of the finest loaf sugar, and one pint of Orange-flower water.

SUMMER CULTURE OF HARDY FRUITS.

THE PEACH AND NECTARINE.—By the time this reaches the readers of THE COTTAGE GARDENER, fruit-trees of all kinds will be in full vigour, and will require more attention than at any period during the summer. Time lost now cannot be regained by any possible amount of assiduity; indeed, the fate of the tree, as to the ensuing year, may be said to be sealed before Midsummer. Were the proper amount of a proper attention given in due time, we should hear little about bad setting in the spring; and with a system of retardation, commenced as soon as the sun in the end of January had any sensible influence on the buds of trees, we should hear much less of Orchard-houses. Not that I despise the latter; but that I feel assured such can never, under existing circumstances, be made to stock our markets; and the stocking of these in a proper way may, I think, be assumed as the true ground-work of all hardy fruit-culture.

PEACH AND NECTARINES.—No trees require more dis-budding than these; and being a subject easily offended, the process must be so performed as not to interfere suddenly with such a habit. However, the first, if not the second, removal of loose spray will have been accomplished; and such having been the case, it is the best practice to take care that every shoot not required be removed at a final thinning just before Midsummer. Immediately on the heels of this the nailing may be done; indeed, a little tacking in of strong shoots will be needed earlier. And here let me advert to the great propriety of pinching all gross shoots as early in June as possible: herein lies the secret of equality in the wood.

PEARS.—These are grown by a variety of plans, more especially as to training. We train them here much on the horizontal plan, and, as I have oft observed in these pages, tie down abundance of short-jointed, young spray annually on the old branches. We feel assured, that where labour is a consideration, it is next to impossible more to simplify Pear-culture. Where such is practised, much disbudding is requisite in the earlier part of June; the operator removing all the grosser shoots. For my part, having a considerable extent of Pears under the above mode of training, I generally, after one severe disbudding, run the hedge-shears over them; but this is not until the shoots are eight or ten inches long; this, of course, is done to prevent too much shading through the abundance of foliage. But here, lest those who prefer other modes of training fancy my trees under this tying-down system are a uniform mass of foliage, I beg to say that such is not

the case. The leading branches, on which are tied down the young spray, are so far apart, that the sunshine can readily penetrate at all times between the parallel lines of branches. Under this mode of culture, there is no apprehension as to the natural spurs starting into wood; if some should do so, it signifies little, when the system is once established, as there are always abundance formed from the young shoots of the former year which had undergone a timely stopping. Indeed, there was always too much fuss made about this "starting of the bud;" it occurred chiefly in pampered trees. Good gardeners, in these times, do not make rich borders for their Pears, they thereby, from the very planting, avoid the evil. Our practice will be, this season, to dub our trees about the third week in June; they have already had a disbudding; then suffer the trees to remain almost untouched until the dubbed shoots begin to shoot again, which will be about the middle of July, when we shall make our final selection with the pruning-knife. On their beginning to shoot again, it will be perceived that some are in a hurry to shoot, others appear stationary, as though they had finished their growth; the latter are the kind we principally reserve for the future year, the former indicating by their luxuriance that they have too great a tendency to make wood.

Every care should be taken over young Pears at this period in a course of training; these will require a different course of management. Where young trees are starting luxuriantly, and it is desirable to increase their size, young, leading shoots may be pinched immediately; and if some liquid-manure can be afforded them they will soon produce young shoots, which can be trained into any desired form.

APRICOTS.—We hope our readers have paid close attention to hand-picking the caterpillar; this should always be done the moment they appear. The early depredations of these is one of the chief causes why the blossoms set shyly the ensuing spring. These caterpillars feed chiefly on the foliage attached to the blossom-bud of the future spring, now in the course of organisation, and by devouring the earlier foliage on which the early maturation of such embryo buds depend, those buds become incomplete, and expand in an imperfect and crippled form in the ensuing spring.

It is of the utmost importance that all coarse shoots, not wanted to train in, be pinched as early in June as possible, when about four inches long, and that such pinching be repeated as often as a rambling tendency appears. There is no tree with which I am acquainted that requires so much light as the Apricot. If any one will pinch closely the foreright spray from one portion of the tree, and leave the other unpinched, he will, in the ensuing spring, be for ever satisfied of this matter. If any of the Aphides appear on the points of the growing shoots let them be instantly dipped in tobacco-water.

PLUMS require a course of management about intermediate between the Apricot and the Pear. Gross shoots must be early pinched, and where trees are short of natural spur-shoots of moderate character should be tied down on the branches. As to the Aphides, the Plum is particularly liable to their attacks, and unless they are destroyed betimes a failure may be the result.

CHERRIES.—Beware of the Aphides on Cherries; no fruit tree is more liable to their attacks, and no tree suffers more from their ravages.

BLACK CURRANTS should have a little mulch spread over their roots to keep them moist, and water should be liberally given them if the least dry. We have mulched ours four inches deep with rotten leaves out of the park, and a week since, just before the rain came, we gave each bush at least twelve gallons of water;

nothing ever looked finer than they do at this time. People complain of their fruit falling; but this is simply from lack of moisture. No fruit requires moisture more than the Black Currant.

RED AND WHITE CURRANTS.—One of the chief points of summer management consists in dubbing or cutting back those watery-looking breast-shoots which are produced in such profusion in June; these should be cut back to within four inches of their base. We use the shears for this purpose.

THINNING.—The thinning-out of fruits where in excess is one important matter at this time; not only is size thereby enhanced, but quality, and, moreover, keeping properties. It is to be presumed that there will be enormous crops of Apples, Pears, Peaches, Nectarines, Apricots, Currants, Gooseberries, &c.; at least we have never had such a prospect in our time; indeed, it is almost beyond prospect, it is hard upon realisation, for these things are already boldly swelling off, and the only rock-a-head, as to ordinary matters, is the possibility of an unusual amount of insect enemies.

Again, then, I say, let these three great maxims of summer fruit culture be at this period well carried out. Mulch and otherwise assist trees carrying heavy crops; keep down insect enemies; and, finally, keep the finger and thumb busy during June and July.

R. ERRINGTON.

On the title-page of the Royal Academy's Catalogue of Works of Art for the present year, appears this motto—

"The critic of Art ought to keep in view not only
The capabilities, but the proper object of Art."

Now, if there be one object more than all others which ought to be aimed at by the artist it is *Truth*. Truth in all the details of his compositions; truth in all their minor accompaniments, as well as in their higher conceptions.

So thinking, we could not refrain from testing, so far as gardening is concerned, some of the pictures now on the walls of the Royal Academy by this touchstone—truth; so we paused before the produce from the easel of one of the masters of our modern school of painting—D. Maclise, Royal Academician. The catalogue thus describes it.

78 Scene—lawn before the Duke's palace; Orlando about to engage with Charles, the Duke's wrestler.—*D. Maclise, R.A.*

Characters introduced, from the left to right of the spectator:—*Dennis* (a servant), *Oliver*, *Charles* (the Duke's wrestler), *Le Beau* (a courtier), *Duke Frederick*, *Celia*, *Rosalind*, *Touchstone* (a clown), *Orlando*, *Adam*, and lords and attendants.

Orlando. "I beseech you, punish me not with your hard thoughts, wherein I confess me much guilty, to deny so fair and excellent ladies anything. But let your fair eyes, and gentle wishes, go with me to my trial; wherein if I be foiled, there is but one shamed, that was never gracious; if killed, but one dead, that is willing to be so. I shall do myself no wrong, for I have none to lament me: the world no injury, for in it I have nothing; only in the world I fill up a place which may be better supplied when I have made it empty."

Rosalind. "The little strength I have, I would it were with you."

Celia. "And mine to eke out hers."—*As You Like It*, act i., scene 2."

We could bestow praise, well-merited, upon much of this picture; and could descend to commend the care bestowed even upon correctness in the costume of the

clown, Touchstone; as gardeners, however, we have nothing to do with these particulars; yet, as gardeners, we may ask why the Fuchsia and the Passion Flower are introduced? The period and the country of "As You Like It" are the 15th century, and a Duchy of France under Louis the 12th. Neither the Passion Flower nor the Fuchsia are natives of France, but of South America; the Fuchsia was not known to Europeans until some thirty years ago; nor even the Passion Flower until Shakspeare had been some thirteen years in his grave!

The gardening anachronisms of the picture do not end here. The season of the scene depicted is autumn—the bramble beneath the garden-seat is "in the sere and yellow leaf," and fallen Vine leaves in their autumn colours strew the foreground. Now, the Fuchsia does not bloom naturally at that season; and Mr. Maclise has clenched his anachronism with this flower by portraying a white-sepaled variety—one of a race of hybrids created by florists within the last ten years.

HORTICULTURAL FETE AT THE CRYSTAL PALACE.—JUNE 2.

(Continued from page 181.)

PELARGONIUMS.

THERE were Geraniums, Fancy Pelargoniums, and Pelargoniums; but not so many of any of them as have been seen at Chiswick and the Regent's Park. The reason seems to be, that no one can surpass Mr. Turner of Slough, in growing them; and spirited growers, like Cæsar, would rather be first with them at a village show, than second best at the Crystal Palace. The Messrs Fraser, however, have now taken to the Pelargoniums, and after beating out Mrs. Lawrence, on her own territory (Chiswick), it will go hard with them if they cannot "enter the Strait" between them and Mr. Turner, where Mr. Dobson has been waiting his opportunity during the last three or four campaigns.

Mr. Turner had £12 for the best COLLECTION OF TWELVE PELARGONIUMS, on which my notes run thus:—*Rosamond* the richest; *Governor General* the highest coloured; *Sanspareil* the gayest; according to my fancy, this is the best Pelargonium we have; *Una* is the best white that has yet been exhibited; but I heard that another, called *Fair Helen*, one of Mr. Storey's seedlings, is even better than *Una*; *Exactum*, the next best white; it is only two-thirds white, however; *Esther* three-fourths white, and equal to, if not superior to, *Exactum*; *Carlos* and *Majestic*, most noble looking; *Arethusa*, *Mochana*, *Achilles*, and *Lablache*, all excellent.

Mr. Dobson had £8 for the second best collection. He, too, began with *Rosamond*—Why do the florists deprive her of her *Fair* title?—*Ambassador*, *Gulielma*, *Magnificent*, *Prince Arthur*, *Enchantress*, *Vulcan*, *Painter Improved*, *Exhibitor*, *Delicatum*, *Empress*, and *Purpurea*.

The Messrs Fraser had £6 for the third best, and of them I noted *Galatea*, *Ganymede*, *Ajax*, and *Magnet*, as different from the above. Extra prizes were given to Mr. Gains, Mr. Beck, and Mr. Strachan.

For the prize of £6 for the best COLLECTION OF SIX, Mr. Foster, Mr. Hoyle, and three private growers contended. The most distinct kinds were in Mr. Hoyle's collection, though they only took the third prize. The kinds were *Sanspareil*, *Wonderful*, *Serena*, *Magnet*, *Portia*, and *Carlos*. These six were the best placed for effect in the Crystal Palace. This was the first time I

had seen *Serena*,—for the class with a large white eye, I shall name it as of the first order, and keep it on my string for recommendation. Mr. Hoyle had several new seedlings there, of which *Pallas* and *Josephine* were my choice. The former is a scarlet, and the other a lilac ground.

FANCY PELARGONIUMS.—I have noticed that at Regent-street, at the Regent's Park, and at the Crystal Palace, the Fancies do not look so gay as they do in the more open tents at Chiswick; but wherever they are exhibited, you have only to place them after the Pelargoniums when you want to murder them outright. The "effect" for which the Palace people paid so much money was not worth sixpence from the Fancy Geraniums. They were drowned as completely as if they were at the bottom of the lower waters. If I had seen these for the first time, I might go about and tell people not to have anything to do with Fancy Geraniums.

Mr. Turner was first with them also, and had £12 for his pains. This is how they took the "effect" on my eye—*Perfection*, *Delicatum*, *Erubescens*, *Madame Sontag*, *Gaiety*, *Celestial*, *Formosissima*, *Cassandra*, and *Jenny Lind*, with *Richard Cobden*.

Mr. Gains followed, and had £8 for the second, in which the following were different from the above,—*Galatzin*, *Vandyke*, *Princess Alice Maud*, and *Eclipse*.

The Messrs Fraser had the third prize, £6, with *Empress*, which is the next best light after *Delicatum*; *Queen Victoria*, *Madame Rosatti*, *Miss Sheppard*, with two bad black ones, and the rest as above.

In the sixes, Mr. Bousie, of Stoke Park, near Slough, was first; Mr. Robinson, Mr. Bradley, Mr. Mocket, and Mr. Windsor followed. Among them, *Berenger* was the darkest flower, and the best of the darks; *Defiance*, a purplish-black; and *Exquisite*, too poor a thing to be so called.

Mr. Young, gardener to Mr. Edwards, had twelve plants of the exact size which amateurs ought to aim at; they were a gay lot indeed.

ROSES.

To those who saw the Roses at Gore House this show would seem out of joint and sweetness. Mr. Lane was first, second, and third, on the part of the trade; he being the only Rose trader who tried his skill for the highest honour; and Mr. Wilkinson, of Ealing Common, stood up for the *Celina* stock, as usual.

Mr. Busby, gardener to J. S. Crawley, Esq., of Stockwood Park, near Luton, had the first prize in the sixes, and A. Rowland, Esq., the second. These were all the Rose showers, and none of them were quite so sweet as they were at Gore House; but Mr. Busby, who had the bad tallies there, changed his tune, and had the best printed tallies in the Palace this day. If Mr. Busby had not come out first-rate at Gore House, I should have said nothing against his tallies, for I never pounce upon small game, and I hope I shall never hit a bird except on the wing; the law on Grouse shooting says, that a man who could shoot a bird sitting, or un-awares, would commit murder.

Mr. Lane had *La Reine*, *Juno*, *Geant des Batailles*, *Paul Perras*, *Chenedolle*, *Coup de Hebe*, *Great Western*, *Blairii No. 2*, *Paul Ricaut*, *Duchess of Sutherland*, with the *Teas*, *Adam* and *Devoniensis*. Mr. Busby had some of the above, and the *Malmaison Rose*, *Armosa*, and *General Jacquemont*, a good dark red. There were boxes of cut Roses, but unless I see a very distinct, new kind, I pass them.

FUCHSIAS.

The second of June was rather early for them, but with the exception of one collection, which was shown last summer at the Regent's Park, the first collection of

to-day were the best grown plants yet exhibited. They were from Mr. Bousie, and in six distinct kinds. Three of the kinds, however, were "near alike"—*Vallecheur*, *Othello*, and *Vanguard*. They might have come out of the same berry, by the same cross, but they were most beautifully grown and flowered, and from five to ten feet high. The fourth plant was a red flower, *Alpha*, and the next two were white, *Miss Hawtry* and *Queen of Hanover*.

Mr. Carol had the second prize, and Mr. Dobson the third. After them there were two extra prizes given.

There was no expense spared for Fuchsias, nor for any other tribe; and it was a thousand pities that people should take advantage of this liberality, and "send in" rubbish, such as was in almost all the rest of the groups which I have not yet touched upon; but as I said before, I must have high game, before I can utter a murmur, and here it is. On the next corner, a collection of *Variegated Geraniums*, not big enough to plant in a bed which might be covered with a lady's parasol. *Golden Chain*, *Dandy*, *Lady Plymouth*, and *Variegated Prince of Orange*, which Mr. Gaines bought from a neighbour of mine, when I was in Suffolk, and turned the good old name to *Odorata variegata*, *Mountain of Light*, and *Silver King*; and who do you suppose would send such little bits of things, from such old kinds, to handsel the Crystal Palace with? Not Lee and Kennedy, certainly, nor *suckers* from the old stools; but offsets of the said firm, which are now getting so variegated, as to forget themselves at times.

AZALEAS.

There were enough of them to make a grand show, if they had been placed all together, as they were at Gore House, which was the finest show of them ever seen anywhere. A half standard plant of *Iveryana* was the most admired of all that were there; then *Exquisita*, and *Variegata*, with *Decora*.

Mr. Green, gardener to Sir E. Antrobus, Bart., had £20 for the best TWELVE AZALEAS. The Messrs. Fraser had £15 for the second best; and Mr. Clark, nurseryman, Brixton, had £10 for the third best. Mr. Carson, Mr. Taylor, and Mr. Keele, had the first, second, and third prizes FOR SIXES. The sums were £10, £7, and £4.

Mr. Ivery, of Dorking, had a number of light and spotted seedling *Azaleas*, one of which, in the way of *Exquisita*, and called *Crelenon*, was the best, and is really a very superb kind. Mr. Ivery was asking two guineas a piece for little plants of it.

CALCEOLARIAS.

These were very numerous, and there were some very good kinds among them. Mr. Henchman, of Edmonton, came out very strong in them. Mr. James, gardener to W. F. Watson, Esq., Isleworth, had the first prize of £6 for the six best Calceolarias; the kinds were named *Culifornia*, yellow ground, dotted with brown spots; *Maria*, brown and spotted; *Virago*, dark and spotted; *Rosabella*, black and spotted; *William the Conqueror*, yellow and spotted; *Duchess of Northumberland*, perhaps the best of them, a pimrose-ground-colour, spotted all over. It will thus be seen that one distinct ground-colour, and that dotted over with small dots, are the favourite kinds at the present day.

Mr. Gaines had a very good lot also, and five or six more prizes were given for them, beginning with £6, as just mentioned.

PANSIES

were very numerous. Mr. Turner, Mr. Dobson, and Mr. Bragg, took off the trade prizes. CUT TULIPS were also numerous, but I do not happen to know one Tulip from

another. I began and finished my Tulip fancy in May, 1852, at a show in Manchester, where four or seven hundred blooms were staged, and I think Mr. Mowbry, of the Botanic Garden there, and I, had to pay 5s. each, or between us, to get in to see them. When I reached Chatsworth next week, I told Mr. Paxton about our entrance fee, and he told me "the greater fools," &c. Of odds and oddities I have a long string; but I hesitate, or rather I tremble, at the sight; but I saw a Funeral Cypress (*Cupressus funebris*) ten feet high, and as open in the branches as the freest *Cryptomeria*, and the side branches from the main ones drooping just as Mr. Fortune said. It will make a splendid thing after all. Twenty-four bulbs of *Hippeastrum*, of various sorts, and some of them very good indeed, from Mr. Hamp. There were three kinds of BEDDING GERANIUMS from Mr. Kinghorn, one like *Flower of the Day* in leaf, the rest as if raised from *Unique Cerise*. The latter, I should like to see growing in a bed, as if it "throws up" as high above the leaves as this one did it will be a good hit.

FRUIT.

Some of the fruit was excellent; but of all the things there, the fruit was the worst arranged. All our Fruit Shows, however, are in the same way. We do not seem to have one person connected with these shows who understands placing two dishes of fruit on the table; and the Crystal Palace people are no exception. I would ask any one, who has been at a London Show, no matter where, if he had ever seen as much arrangement there as would teach him or her how to place a dish of apples, a dish of pears, and some nuts and raisins, with nut-crackers, on his own table, or on the table of a charity school, for the children's "frolic?" Nothing of the sort has ever been attempted. Now, if I were engaging a gardener for myself, the very first point on which I would examine him would be on the dessert. I would name so many dishes, beginning with six, and on to forty, and ask him how he would place each set on the dinner table. Hundreds of gardeners grow the most costly fruits to the highest perfection, and yet one out of a hundred of them hardly know the common routine of the dessert table. Meantime, if I was rich enough to afford it, I would offer three good prizes for the best, second, and third best arranged dessert, at one or other of our national shows. As much taste and nicety might be shown there as in planting a flower-garden; and for a first design, I would lay down a skeleton thus:—Take four pots of the best bush or tree-fruit—one kind of fruit in a pot—or two pots of one kind, and place them close together on the very centre of the table; no steps or stages should ever be had for fruit; all ought to be on a level after dinner. Call these four pots your centre piece, and "flank" them on each side across the table—not lengthwise,—recollect the flanks need not necessarily be of fruit at all, any fancy thing will do; two pots of *Adiantum*, set in two fancy jars, will do; then think on your top and bottom dishes, at the very extremity of the table, and place them also exactly in the very centre at each end; for the top I would take the best or scarcest fruit at the show,—the Mangostene for instance; the bottom dish need not correspond with the "top," except in size; but for a very large dessert you may have two tops and two bottoms, then both ends of the table are "tops," and the two bottoms come in next to your centre, then you see one reason for having a centre at all. Now you want four corner dishes, or eight, if you have two tops and two bottoms; but let us say four, for the simplest; the four corner dishes should be exactly of the same size and height, but there should be two kinds of fruit in them at least, and four kinds will do better; after them, smaller fruit on lower dishes come in at regular distances between the

top and the centre, *and in pairs*; and the same between the bottom and the centre. Now the table may be long enough to hold forty pairs of dishes on each side of the centre without being crowded, or it may be so short that no more than four pairs can be placed on the whole, that is, a couple of pairs on each side of the centre. Now take them all in the lump—

A centre;

Two flanks, across the table, to correspond;

Two top and bottom dishes, ditto;

Four corner dishes ditto;

the rest in pairs, but each pair to have a match pair on the other side of the centre. This skeleton is the rule from St. Petersburg to St. Kilda, even where the dinner is set on the sideboard, and the company sit down at once before the dessert, and ask the waiters for such and such things as they want from the sideboard. This arrangement cannot be departed from, but the variations, in the filling of the dishes, and in the disposition of the secondary ones, is endless; and whoever places them in the most varied and tasteful ways should have my award with pleasure, and with profit to a thousand gardeners, and ten thousand visitors. I think Sir Joseph Paxton is the most likely man in England to cut up our old fruit shows, and tell us, or rather show us, how they do it "up stairs."

D. BEATON.

RANCID OIL.—Dr. Griesler has discovered that a few drops of spirit of ether will, when mixed with rancid oil, restore its freshness.

THE WEATHER.—In various parts of Lincolnshire, during the intensely cold nights of the three last days in May, many sheep that had been shorn were found dead from cold. A number of swallows were also found, killed by the inclemency of the weather, on the Branston Road.—*Stamford Mercury*.

STRUCTURES ADAPTABLE FOR REARING AND PROTECTING PLANTS.

"I HAVE a room unoccupied, heretofore used as a joiner's shop, about eighteen feet long, from north to south, and eleven feet wide, from east to west. The gable ends standing north and south. There are three small windows on the west and east sides. It is in a situation to enable me to warm it by hot-water at little expense, and to maintain, day and night, any heat that may be needful without any expense whatever. Now, in the first place, I want to know whether it would be worth while to place a glass-roof on to this place? Whether rough plate glass would be best and cheapest? And on what principle it should be done? And, secondly, to what purpose this place could be most suitably employed for helping the kitchen and flower-garden?"

A prevalent idea exists among many amateurs, that, provided they can obtain *heat*, the chief requisite for the healthy existence of plants is secured. This fallacy cannot be too quickly dispelled. Many a plant is ruined for ever by being coddled in a snug place in a warm room, that might have been alive and flourishing if it had been kept in a cooler place, and received all the light possible. It is well known that both the physical and mental powers of rational existence are apt to be seriously injured when deprived of light and air; but the absence of these agencies from plants in a

growing state is certain destruction. Let it be clearly understood that solid additions to plants take place almost alone during their access to light, and a fruitful field of disappointment would be avoided. Do not be deceived, in this respect, by seeming appearances. Plants will elongate freely and quickly in darkness and shade, but it is chiefly at the expense of the matter previously stored up in them. Hence, in hothouses, kept at all warm at night, elongation takes place chiefly then, and very little during bright, sunny days. It is as much as the sun can do to consolidate the lengthenings of the previous night. Every one knows that a Potato-stem, left in a dark cellar, will extend itself to a great length; but any one who has taken the trouble to kiln-dry such stems, so as to dissipate the mere moisture obtained from the place, and then burn them, or char them in a close vessel, will, from the smallness of the remains, compared with the remains from shoots grown in the open air, at once obtain an insight into the fact, how necessary light is for giving solids, the wood and fibres, the carbonaceous matter to plants, without which they cannot long stand without crutches, which speak of consumption and decay.

A few of such experiments would clearly unfold to the most inexperienced that rooms, large or small, can be of little use for keeping plants in a *growing* state, if these plants are not properly supplied with light. Only those near the windows can have justice done to them. The case is different with many plants, if you merely wish to preserve them, and not to grow them; and these are such as may remain in a torpid state for a considerable time without injury. For instance,—in such a position as our correspondent describes, there are many things that would not survive the winter out-of-doors, that would keep well in a room with only a window or two, provided the temperature was seldom at freezing point, and ranged from 35° to 40°, abundance of air being given to keep the room cool when the outside temperature rose above those named. I have seen fine specimens of the sweet Verbena (*Aloysia citriodora*) kept in this manner for years,—taken up out of the ground, and slightly pruned, and potted at the end of October, housed in winter, hardened off by degrees, and replanted again in the following May. The whole of the *Fuchsia* tribe may thus be safely kept; the great thing is not to allow the heat to get so high as to start the buds before you can remove them to a window or a greenhouse. Many of the *Jasmines* and *Honeysuckles*, a little tender, may be treated in the same way; and the roots of the strong-growing scarlet and purple *Lobelias*, and many *Salvias*, such as *Fulgens*, *Patens*, *Coccinea*, *Chamaedrifolia*, &c., may thus be easily kept in boxes of soil, and that soil rather dry. *Succulent plants*, in general, will also keep well, secured from frost, and kept cool and dry. All that is necessary is just to sustain the vital powers, not to excite them. I have seen many of Cactus varieties, *Mesembryanthemums*, and other succulents, thus safely kept in a darkish room; but as soon as the warm days of spring came, they were brought to the window, or the greenhouse, and all the heat and light possible given to them in summer. Thus, also, *Scarlet Geraniums*, because they contain so much succulence, may be safely kept in such circumstances, if they have been established, and of some age. Young cuttings would be ruined. As *Verbenas*, &c., must be kept slowly growing, it would be vain to expect to keep them, or *Calceolarias*, in a room, if they did not receive a good amount of light and air, and be placed *near* the light; for though the room, from a window or two, may seem to be light enough, let it be clearly understood, that such plants cannot thrive in the diffused light, such as they might receive in the middle of the room; but they must have direct light, such as they can receive only when close to

the window, and the light striking the plants at certain times of the day directly and unobstructedly.

Our correspondent will now form some idea of what he may accomplish with this joiner's shop, just as it is, or merely by enlarging the windows. Old Scarlet Geraniums would keep there very well from November to the end of March, with heat applied so as not to have the temperature above 40° ; and by that time they could be turned out to earth and straw pits, and protected with calico and straw mats, as practised by Mr. Gardener. Young, growing plants, and all Calceolarias, Verbenas, &c., could only be kept near the windows. A six-inch pot, however, might contain a score of young plants during the winter.

All things considered, our correspondent will by this time be aware, that we would recommend him to put a glass roof to his room. Hartley's Patent would be the best, but not the cheapest. Some other rough plate glass we have met with burns as well as shades. What we have seen of Hartley's, saves all trouble in shading, allows a sufficiency of light, and is free from scalding and burning spots. Did we study economy, however, to a nicety, we would be content with British plate of the commonest description, and ranging from fourteen to sixteen ounces to the foot. Did this allow too much light and heat in summer, we would neutralise this by daubing it with a solution of double size, containing a small portion of whitening. If it was desirable to remove this in winter, a little water, containing some soda in solution, would quickly remove it when rubbed with a cloth, and thus there would be a clear roof in the dark days, and a rough, shaded glass roof in summer, at the expense of a few pence, and an hour or two of labour, yearly—labour which must be given to wash the glass, at any rate.

As to the best and cheapest mode of doing this, that will greatly depend upon the state of the roof after the tiles, or slates, or whatever covers it, are removed. I presume that the present roof slopes to the east and west from a ridge in the centre. The higher that ridge, the more glass, of course, would be required. Many of such roofs have the ridge some five feet above the level of the wall-plate, and, in proportion to its height will be the length of the sloping roof, from six to seven feet on each side. One foot of that, however, next the ridge-board, might be of wood, or any other opaque material. Were the roof to be entirely reformed, from two-and-a-half to three feet would be quite sufficient from the level of the wall-plate to the centre ridge-board, which would give a glass roof on each side of from five-and-a-half to six feet to cover a space of eleven feet in width. Supposing that the roof is run high, and it is desirable to continue it so, it will not be all loss, as a stage may be raised in the middle of the room with shelves to suit,—say with seven feet for its base, which would admit a walk all round close to the walls of the room of two feet in width. With a flatter roof, the best stand will be a level sparred table, at a level of a foot or so below the wall-plate. While growing plants are kept on this stage, many things, such as Fuchsias, Dahlias, Salvias, &c., may be harvested, or preserved, beneath it. I am all along supposing that the walls of the room are high enough to permit of walking upright.

Before fixing on the style of roof, I would advise referring to an article in the number for the 6th of February, 1855, and what is there said of using light rafters, without sash bars, and glass wide enough to reach from rafter to rafter. Most of this sort of shed roofs are supported by small rafters, some two inches wide, and three or four inches deep, and very likely from fifteen to twenty inches apart. Were these rafters in pretty good order, though rather in a rough state, and were economy my object, I would polish them off a little, bevel them off with a spoke-shave inside—if neatness

there was desirable—obtain glass of the necessary width to reach from rafter to rafter; bed them there on putty in the usual way, and secure the squares in their places by a thin board, wide enough to catch the ends of both squares that meet on the rafter, placing either putty or a slip of Indian-rubber between the thin board and the glass, and then screwing it down to the rafter. If the rafters are wide apart, say eighteen or twenty inches, it would be desirable not to have the squares more deep the other way than eight or ten inches.

If it were desirable to alter the roof, and combine elegance with economy, and strength of glass, then, for such a roof, I should deem sash-bars fifteen inches apart, two-and-half inches deep, and one-and-a-half inch wide, quite sufficient. The squares in this case would require to be nearly fifteen inches in length. Were wood a trifling object, and glass the chief consideration, sash-bars might be made in the usual manner, only a little stronger—say two inches in depth, and one in width, and these, placed at six or seven inches apart, might be glazed with pieces cut to size at from 12s. to 16s. per 100 feet. What is saved in glass will be lost in the extra quantity and labour of the wood.

There is one other thing to be attended to. I have been supposing that the roof is all to be fixed, for that is the cheapest way to do it. Supposing that the three windows will open, that will admit of sending a current of air through the lower part of the house. But that will not be sufficient at all times, nor will it prevent a high temperature accumulating at the top of the house during bright days in summer. Two or three openings should, therefore, be secured at the point, from eighteen inches in length, and from eight to twelve inches in width; and the most economical mode of doing so, is to have a board of that size moveable on a pivot at each end, and opened and shut by pulling a string.

Supposing such a small house secured, I hardly know how to say it could be made a helper to the flower and kitchen-garden, unless that has already become apparent, as the uses of such a help are endless, and the benefits to be derived are proportional to the skill and the industry and perseverance of the possessor. One thing the proprietor must clearly make his mind up to, namely, to treat such a house in the winter months chiefly, or entirely, either as a safe store-house, or as a growing-house, in which the plants may be attractive when all is sterile out-of-doors. For the first, an average temperature, in cold weather, of from 35° to 40° will be requisite. For the second, a temperature of from 45° to 50° will be required. It is next to impossible to combine the two. For instance, suppose that your stage, or table, is filled during winter with Calceolarias, Verbenas, Penstemons, young Geraniums—chiefly of a bedding character—then the space underneath may be filled with such things as I mentioned suitable for a room, and will not stand in need of much light, if not exposed to a temperature higher than 40° . Care should also be taken that the water spilled in watering those above them should not reach them in any quantity, though a drop now and then will do them no harm. Subject these things, however, to a growing temperature of 45° to 50° , and onwards, and you cannot keep them quiet, they will grow; and then they must have light, and if you are so crowded as to be unable to give it them, weakness and blanching are the consequences. On the other hand, supposing that you wish to bloom Cinerarias, Chinese Primulas, Camellias, &c., in such a house in winter, or even to grow some fine early-flowering plants of florists, or Fancy Pelargoniums, there is nothing whatever to stop you, provided you can keep up a temperature of from 45° to 50° , and onwards; but then, not only would plants you merely wish to keep be excited into growth, but such a temperature would be ten degrees too high for Calceolarias and Verbenas, and

even, from November to March, for Scarlet Geraniums, unless you had plenty of room and light for the latter, and then they would not mind it. In making use of such a house for the flower-garden, much of its usefulness would depend upon having a cold pit of some sort, into which the Calceolarias and hardier things could be transferred by April, to be sheltered a little for a time, which would leave more room for other things to be potted, pricked off, &c., and they to be hardened again in their turn.

As an assistance to the kitchen-garden, such a room would be most valuable. There is Mustard and Cress in winter; Mushrooms might also be grown on the floor, if desirable, if the highest temperature, 50°, is maintained in winter; and Sea-kale and Rhubarb might also be forced; Potatoes and Beans and Peas could be started in pots and boxes previously to their being planted out-of-doors. Vegetable Marrow, and ridge Cucumbers, Capsicums, and Tomatoes, and numberless things, too numerous to mention, could be forwarded in such a place, gradually hardened off, and then exposed to the open air.

Then the summer residents of such a house might be exceedingly varied, according to the wishes of the proprietor. For instance:—supposing that the out-door residents are all out by May—a fine summer display might be made with Fuchsias, and florist's Geraniums, or with Achimenes, which would require a little more heat or moisture; or if the eatables were more a consideration, and it was desirable to try Melons and Cucumbers, both could be successfully grown in large pots or boxes, the plants being raised in a small hotbed, and introduced to their fruiting pots or the house by June. These could be all removed, the house cleaned, and made ready for its winter residents, by the end of October, or earlier. So that there is no end to the pleasure and profit which may be derived from such a house.

"I have another room unoccupied, over a smith's shop, seventeen feet by fourteen feet, with a span roof also, six feet high to the lowest point of the roof; and I could have about thirty-five to forty square feet of window in the south gable; but should have no other means of warming this, than a gas or Arnott's Stove."

This also might be a most useful place; but not equal to the other with the glass roof. Care should be taken that plenty of air can be admitted by the windows, and also that all cuttings and growing plants should be kept on shelves or stages near this glazed end. Succulents and roots may be preserved at the darkest end, as indicated above.

R. FISH.

A PRINCESS TURNED FARMER.—Princess Murat has recently purchased a residence in the vicinity of Cincinnati, which she is improving and ornamenting according to her own taste. She lately sent to the editor of the *Florida Sentinel* an Irish potato, weighing fifteen ounces, as a sample of her crop. We rather suspect, however, that this is over an average specimen. The Princess Murat, is widow of Achille Murat, son of Marshal Murat, King Joachim of Naples. She is a Virginian lady, daughter of the Hon. Bird Willis.

MEETING OF THE HORTICULTURAL SOCIETY, REGENT STREET.—JUNE 5TH.

ON the Tuesday following the Crystal Palace Exhibition there was a Meeting of the Horticultural Society, in Regent Street; and although I had enough on hand

as it was, I could not resist the temptation of running up to town to see old friends and new faces.

On reaching the Rooms, in Regent Street, the first things which caught my eye were the cream from the Crystal Palace Show, and the first of that were the clear, yellow, shining *Rhododendron*, from Borneo, and the lovely *Meyenia erecta*, from the Messrs. Rollison; the *Embothrium coccineum*, and the yellow *Rhododendron*, from Mr. Veitch. Meantime, the yellow *Rhododendron* has been named after the Rajah of Sarawak, Sir James Brook, *Rhododendron Brookianum*. The *Meyenia* was not enclosed in a glass case, as at the Crystal Palace; and I could examine the new *Embothrium* at my leisure. Regent Street is by far the best place to meet new plants; as, if one is in a fix about them, a good authority is at hand; and there is the library up-stairs, and enough of practicals are on the boards to finish off one's instruction on the spot.

Below-stairs, Mr. Ferguson, of Stowe, had 6,000 *Peaches* and *Nectarines* laid out, with a tally, to say they were the mere thinnings from trees which never bore well till they were covered with glass—an Orchard-house, in fact. Two days after this, I saw the old Rose-house, at the Society's Garden, turned into one of these Orchard-houses, where Mr. Gordon, the major-domo of the Society, has been doing wonders for the last nine months. The house is full of pots from end to end, and every pot is full of fruit from top to bottom, except the Willow-leaved Peach, which Lord Hardinge sent home from the North of India.

The Roses in the new Rose-house are Roses indeed, and worth going miles to see. The scarlet *Rhododendrons* of the Tree breed have stood the winter there perfectly—splendid acquisitions are up and potted off from Mr. Skinner's foraging in his native elements, round about Guatamala, and the fruit crops are abundant; but I dislike sending out foreigners to collect plants for the Society with our English money, from my old experience in the same line. But this is neglecting that I am in Regent Street, where the Messrs. Veitch and the Messrs. Rollison stood face to face with collections of the most lovely Orchids; but how the prizes went, I did not hear. Mr. Henderson, of Pine-Apple Place, had a large collection of stove and greenhouse plants there; and as he did not show at the Crystal Palace, I shall run over his names—*Medinilla magnifica*, in full bloom; a large white *Crinum*, called *Giganteum*, had seven open flowers, and some buds; *Phrynium sanguineum*, the purple Canna-like plant; *Boronia Drummondii*, a new one, and one of the best of them, with bright rose blossoms, and an excellent close habit, and small leaves; this is a sure addition to the exhibition plants; *Fabricia diversifolia*; *Grevillea sanguinea*; *Boronia molina*, another good one, with large, lilac flowers; and several others, but well-known kinds.

From the Garden of the Society we had the two new *Viburnums*, *macrocephalum* and *plicatum*, in full bloom. The first has large heads of pure white flowers, of a size half-way between a good Guelder Rose and a Hydrangea; and *Plicatum* is not quite so large and more close; *Scheeria Mexicana*, a *Gesnera-mollis*-looking plant, with blue *Gloxinia*-looking flowers; and others, with cut flowers of Fortune's tree *Pæonias*; the white *Glycine*, and the double-yellow *Datura*; and a dozen of pots of *Strawberries* from the said Orchard-house, most interesting on account of their history. Small runners were potted, last September, in 60-pots, and after that into 48-sized pots, in which they now fruit, without forcing, as large as natural size, *Keens' Seedlings*, fit for table; *Princess Alice Maud*, very nearly so; *Prince of Wales* about the same; and *British Queen*, only in a green state; all from the same treatment.

Her Majesty sent us, through Mr. Ingram, a large bunch of the tops of *Paulownia imperialis* in full bloom;

quite a sight from the "Slopes" at Windsor, and no protection to the tree last winter. Who will not now take care of their Paulownias till they come of age, to bloom after the hardest winter; and that, too, like a grove of blue Foxgloves? There never was a more welcome sight before.

Mr. Wilkinson, the champion for the *Celina stock for Roses*, was there again, with fine samples in proof of this as a good stock.

There were cut Rhododendrons from many growers—so also were Pelargoniums and Fancy Geraniums, and the scarlet *Unique*, the bedder, from Mr. Gains; a splendid specimen Heath (*Ventricosa magnifica*), four feet by four feet, from the Messrs Rollison; half-a-hundred of *Asparagus*, weighing two-and-a-half pounds, from Mr. McEwen; also a collection of *Strawberries* and *Pine Apples*, showing that the Edinbro' people could not discourage him; besides many more Pine-Apples, Peaches, Nectarines, Raspberries in pots, and many other extras.

D. BEATON.

CAULIFLOWER AND BROCOLI.—The flower-buds of these delicious vegetables may be cooked like the cabbage, or as the asparagus. They should be dropped into clean boiling water, taking care not to let them boil too long, as the buds will drop off. Season with butter, pepper, and salt, with the addition of a little white wine.—*Iowa Farmer.*

PLANTS TO SUSPEND IN BASKETS IN THE GREENHOUSE.

(Continued from page 162.)

I now proceed with my list of plants suitable to suspend from the roof of a greenhouse; and, as there are more greenhouses than stoves in this country, I hope the list will be more generally useful. As might have been expected, there are many more plants suitable for this purpose in a cooler house than in a warm or hot one.

AOTUS GRACILLIMUS (*Most-slender*).—A plant from New Holland, with long, slender, drooping branches, small Heath-like leaves, and bright yellow flowers. Requires sandy peat and loam.

CAMPANULA FRAGILIS (*Brittle*).—A native of the Alps, with pretty blue flowers, and medium-sized, bright green leaves. It has long, slender, drooping branches, and is well adapted for small baskets. Increased by division, in spring. Peat, loam, and leaf-mould in equal parts.

CEREUS (*Torch Thistle*).—All the plants of this genus that I mentioned as being fit for this purpose in the stove will do equally well in the greenhouse, provided they are kept nearly dry from October to March. Their richly-coloured flowers and heavy-drooping stems render them very showy, attractive plants, especially when in flower.

CALAMPELIS SCABRA (*Rough*).—From Chili. Flowers bright orange, produced during a long season. Leaves rather small and numerous. Branches drooping. This plant grows well, and flowers freely in the baskets at the Crystal Palace. Requires rich, light soil. (This plant is usually called *Eccremocarpus scabra*.)

COBCEA SCANDENS (*Climbing*).—The well-known Cobcea grown so largely by nurserymen round London, to place on the balconies of the fashionable streets and squares of the metropolis. As a basket-suspending plant it requires a largish pot and plenty of space to droop in. Native of Mexico, with large, trumpet-shaped, dull purple flowers, and large leaves. Produces seeds abundantly, which sow in March in a hotbed; pot off

when in seed-leaf, and grow on by repotting till the plants are large enough for the basket, stopping often, to cause more branches. Few plants are more showy than this well-known climber. Requires rich soil, and a large basket to grow it well.

DILLWYNIA SESSILIFLORA (*Stalkless-flowered*).—A pretty, New Holland plant, with branches that droop naturally and numerous; small, orange-coloured flowers. The branches are so thickly placed on the plant, that they will hide the pot completely, unless tied up to sticks; hence, it is peculiarly well adapted for a small basket. Requires two-parts peat and one loam, liberally mixed with silver sand.

DISANDRA PROSTRATA (*Prostrate*).—An old inhabitant of our greenhouses, from Madeira, usually placed on shelves, to allow its drooping branches to hang down. It produces its bright, yellow, star-like flowers in June, and from its drooping habit is an excellent plant for a basket. Rich, common garden mould will grow it admirably. Increases readily by division.

EPIPHYLUM.—A division of the Cactus tribe. The name is derived from *epi* upon, and *phyllon* a leaf. The flowers are produced from the crenatures, or indentations, of the broad, fleshy leaves. In the greenhouse they should have little or no water in winter, but plenty when growing during the hot summer months. They thrive all the better and flower most freely when fully exposed to the summer sun.

The species and varieties most suitable for baskets are—

E. ACKERMANNII (*Ackermann's*).—From Mexico, with large, scarlet flowers.

E. AURANTIACUM (*Orange*).—Brazils. Flowers scarlet-orange.

E. BRIDGESII (*Mr. Bridge's*).—Mexico. Flowers large, scarlet shaded with purple. A fine species.

E. JENKINSONII (*Jenkinson's*).—From South America. Leaves very large; flowers also large, and of a bright scarlet; a very fine species.

E. SPLENDENS (*Splendid*).—Brazils. Branches and leaves very dense; flowers numerous, and of a bright scarlet colour.

E. TRUNCATUM (*Abrupt-ended*).—Brazils. Pink.

E. TRUNCATUM COCCINEUM (*Scarlet*).—Hybrid.

E. TRUNCATUM RUSSELLIANUM (*Duke of Bedford's*).—Purple; branches very numerous; flowers purple.

E. TRUNCATUM VIOLACEA (*Violet-coloured-flowered*).—The handsomest of all the varieties of *E. truncatum*. I mentioned *E. truncatum* before in the list of plants for suspending in the stove; but they do very well in the greenhouse, provided they are kept quite dry in winter. They all require a very open, rather rich soil. The best is composed of peat, loam, and lime-rubbish, mixed with broken pots in equal parts, and dried lumps of cow-dung mixed amongst the compost. The baskets should be (invariably) well drained. These plants are often killed by giving water when cool and at rest, and by a too close, compact soil, which is almost certain to rot the roots. A large plant, however, will recover after the roots are dead, if cut off to a sound part, and laid on a shelf for a month to dry up the wound, and then put into a pot filled with rough, open materials, such as the compost described above, with the addition of several pieces of broken brick. If well managed at the root, these splendid flowering-plants will make quite a show, when in bloom, in their suspended baskets.

HARDENBERGIA MONOPHYLLA (*One-leaved*).—A well-known greenhouse climber, from New Holland, with handsome foliage, and spikes of blue flowers produced from the axils of the leaves. With a little management, no plant is better adapted for basket-culture. Requires two-parts peat, and one loam, with a free addition of sand.

HIBBERTIA GROSSULARIÆFOLIA (*Gooseberry-leaved*).—

From New Holland; and another most excellent plant for suspending. Foliage like the Gooseberry, but coloured underneath; flowers bright yellow, and produced in succession for a considerable period; grows best in sandy loam with about a fourth-part of sandy peat added. Increased readily by cuttings of the young shoots, in sand, under a bell-glass.

KENNEDYA MARRYATTÆ (*Mrs. Marryatt's*).—From New Holland. A charming plant, with many branches, naturally drooping; very neat foliage, and showy, scarlet flowers; just the sort of plant for a basket. Requires sandy peat and loam in equal parts. Increased readily by seeds, which are produced plentifully.

LOPHOSPERMUMS.—Every species of this genus will answer well to grow in baskets, as is well exemplified in the baskets at the Crystal Palace. It is wise, however, to renew the plants every second year, because the old leaves die, and the stems become naked near the baskets. As they produce seeds freely that is of no consequence, excepting the little trouble incurred. Sow them in a hotbed early in spring, and pot off as soon as the plants can be handled; repot once or twice, and then put the plants in the baskets. They will flower the same year. Should some of the species not seed freely, they may be propagated easily by short, stiff, young cuttings, taken off in July, put in common, pure, sandy loam, in a cold pit, or frame; shaded from the sun, such plants do as equally well as those from seeds, perhaps better, because they flower more freely.

LOTUS JACOBÆUS (*St. James's Island*).—One of the Cape de Verd Islands, where this plant was first discovered. Branches numerous and inclined to droop. Flowers a rich, dark, brownish-crimson. Well adapted for basket culture. Requires a rich, light soil. Increased by seeds and cuttings easily enough.

MAURANDYA.—Like the *Lophospermum*, all the species and varieties of this genus will answer as basket plants. Their culture is so easy and well-known, that I need only refer to the directions given for *Lophospermum*; the same culture suiting this genus as well.

MESEMBRYANTHEMUM.—This is a genus that will do well suspended in the full light of the greenhouse. Indeed, I am often surprised that they are not more cultivated even as window plants, for which they are admirably adapted, requiring so little attention in watering and repotting. Those with heavy leaves and pendulous branches are, of course, the best for basket culture. They will live and flower for several years; and on that account are valuable for this purpose. The same soil, or compost, as that I have mentioned for the *Cactus* tribe will suit them well, and also the same directions as to watering, &c., is proper for them. They are all, or nearly all, from the Cape of Good Hope. I shall mention the best for this purpose.

M. AURANTIUM (Orange). **M. BICOLORUM** (Two-coloured). **M. BLANDUM** (White). **M. COCCINEUM** (Scarlet). **M. DECUMBENS** (Bent-down); pale red. **M. DOLABRIFORME** (Hatchet-leaved); yellow. **M. FORMOSUM** (Beautiful). **M. INCLAUDENS** (Never closing); the only one of the genus that never shuts up its flowers till they decay; droops naturally, and has beautiful, purplish-pink flowers. **M. MICANS** (Glittering); scarlet. **M. SPECIOSUM** (Showy); scarlet. **M. VIOLACEUM** (Violet).

NIEREMBERGIA.—A genus of prostrate, herbaceous plants, with pretty flowers. All will do well in baskets. Require rich soil, plenty of water in summer, but kept rather dry through winter. I have seen *N. CALYCINA* in a basket, flowering freely even so early as May this year.

SAXIFRAGA SARMENTOSA (*Trailing*).—This is a very common plant, and may be seen suspended in many a cottage window. It has large leaves, and pretty, pinkish flowers; the branches hang down and produce, at many joints, young plants, which, if taken off in spring and planted in pots, quickly make plants. The cottagers

call it the "Beef-steak plant," the underside of the leaves being something of the colour of that animal flesh. It is admirably adapted for suspending.

TORENIA ASIATICA (*Asiatic*); purple and white.—A plant, from the East Indies, of great beauty. Its habit is straggling; some branches ascend, others shoot out horizontally, and some droop downwards. It will bear the greenhouse in summer, and flower better there than in the stove; but a few plants should be kept through winter in the stove, as they will die in the greenhouse in that season. It might be grown in the stove even through the summer, but should have plenty of air and partial shade, or the leaves will turn brown. I ought to have put this amongst my list of stove suspending plants.

TROPEOLUMS.—Many of these answer well to put in baskets, but require renewal every year. The best are *T. Caroline* and *T. Triomphe de Leige*.

I have given rather a long list of plants to suspend in the greenhouse. The cultivator should read it carefully, and select such as suits his fancy, or that he can easily procure. None of them are expensive; some as low as one shilling each, and none more than two-shillings-and-sixpence, so that a large house, after the baskets are procured, may be furnished for a trifling sum.

I have a letter by me, from a gentleman near Liverpool (G. C. Schwabe, Esq.), in which he says, that the *Rose Viscomtesse des Cases* has grown and flowered well in baskets in his greenhouse. I saw many *Roses* in pots in his preparatory house, trained downwards, and covering the pots entirely with healthy, rich foliage. No doubt many of them have flowered well, but none so much so, it appears, as the one he mentions. He had, also, many plants of the *Ivy-leaved Geranium*, in suspended pots, which quite covered and concealed them. This method of growing the *Rose* opens a wide field for experiments. As *Roses* do so well, why may not many other shrubs do well also; and many other kinds of flowers. The *Verbena*, for instance, the blue *Anagallis*, and a host of other plants. Even the grateful *Strawberry* might be cultivated in this way, and would yield to few other plants for beauty, in bloom and fruit, besides yielding a dish, now and then, of one of the most health-giving fruits we possess.

Turning back to my first paper, I see my next subject is

SOIL AND PLANTING.

Soil for the Greenhouse basket plants I have described under each. The Stove species should have the usual compost, peat-loam and leaf-mould in equal parts, unless otherwise specified. The season for planting extends over nine months of the year, that is, from the middle of February to the middle of November; but, in general, the best season is in early spring. The plants then have the best season before them to grow in, and get established before the winter sets in. In planting, great care should be taken to keep the roots uninjured; the balls should be kept entire. It will be found that the balls will slip out of pots more easily when rather dry. Even if the plants are to be grown in pots inside a basket, it will be desirable to repot them just previously to placing them there. Some free-growing kinds would keep fresh, and grow more vigorously for a longer time if the pots inside the baskets were covered with green moss, which would also conceal the pots more effectually, and keep off the rays of the sun from their sides, and thus prevent, in a great measure, the evaporation of the water. The longest kind of moss should be chosen for this purpose, so that it may not drop or hang down raggedly through the meshes of the baskets. Tuck it in neatly, and clip off any straggling particles that may escape out of the baskets. I know, by experience, that this moss is a great help to preserv-

ing suspending plants, and keeping them fresh and green through the hottest days of summer. *Moss* is not half so much used as it deserves. As a mulching for American plants there is nothing equal to it. It acts as a non-conductor two ways. It not only prevents the heat of the sun drying up the moisture, but it prevents that moisture from evaporating from the soil.

T. APPLEBY.

(To be continued.)

PEAS AND STRAWBERRIES IN NORTH AMERICA.—We learn from the *Norfolk Argus* (May 10th), that Peas and Strawberries were then in the Norfolk market from gardens in the vicinity of that city. Peas three dollars per peck—Strawberries two dollars a gallon.

AN EXTENSIVE FARMER.—Michal L. Sullivan, an Illinois farmer, it is said, is about to sow ten thousand acres of land in corn. He was one of the largest farmers in the State of Ohio for many years, and, according to a contemporary, he could ride in a direct course fifteen miles through his own corn-field.—(*New York Independent*.)

CULTIVATION OF LETTUCES ON DRY SOILS.

A good, well-blanching Coss Lettuce is at all times acceptable, and in the hot weather of the dog-days doubly so. Now, every garden is not adapted to its growth at such times; and it will be useful to explain what may be done to overcome the evils attending a place too poor or dry.

In the first place, we all know that a garden having a hungry, sandy, or gravelly soil, not well supplied with manure, either in a liquid or solid state, is not the one to expect good Lettuce from in a dry season. A hot sun speedily withdraws all the moisture that is within its reach, unless it be assisted, to a liberal extent, by manure in some shape or other; and the drain there is on that substance renders it necessary to look well to the best means of supplying it in just such quantities as may be wanted, and also at the precise time when it is called for.

This renders it advisable to give manure always in a fluid state to crops like Lettuce on dry, hungry soils, for in that condition, and when the plant wants it, a certain amount of vigour as well as moisture is ensured to the produce. Now, this feeding matter ought to be carefully prepared and administered, and only so much of it used as needs be at a time; in addition to which, means must be taken to improve or deepen the surface-soil of such dry ground, by adding anything that can be obtained of an opposite kind,—marl, loam, road or ditch scrapings, and even clay itself, will be of service in such a case; for what is mostly wanted, is something that will prevent that hasty escape of water, which is the ruin of light soils, while it too often happens that the substratum is of too barren a character for roots to be tempted into it and prosper.

Some light soils do contain a substratum useful and agreeable to vegetation. A sandstone shatter is of this description, for on it many things thrive well when the surface-soil presents only a few inches of loose stony matter. A limestone bottom is also good; but this

often presents a tolerably good depth of soil, and that of the best kind. Flint too often betokens chalk, and is only adapted to a certain class of plants,—good Lettuce not being of that number; but where there is no choice in the matter, liberal applications of water will make such a soil productive, adding, as stated above, manure at the time when the plants are in a growing state. This manuring must be continued while dry weather lasts, otherwise the check which the plant receives at the time it ceases to receive its periodical allowance will occasion its running to seed, on a like principle that Pines and some other things are thrown into flower or fruit by similar means.

To have really good, well-blanching, and crisp Lettuce on dry soils, in a dry, hot season, be sure and sow only the newest seed that can be had, and let it be sown where it has to remain, thinning the plants carefully, and commencing watering early,—say by the time they are about the size for planting. Continue this every two or three days, as the weather and other circumstances may seem to require, taking care to increase the quantity or quality of liquid-manure as the plant advances in size, and towards the last, daily waterings will not be too often if the weather be exceedingly dry; of course, using soft water, if possible, or, if not to be had, let the other water stand some hours in the sun before using, for cold spring-water is at variance with the well-being of all plants.

Give a good soaking when you do water, for in this case there is no danger of giving too much on ground so naturally drained; but when manure-water is given, it would be better to give no more than would just moisten the soil as deep as the roots are; but in all this watering some care must be taken to prevent it from evaporating too quickly at top. Leaf-mould is the most tidy-looking substance, which can also with advantage be dug into the ground afterwards; but if that cannot be had, something else must be substituted. *Moss* is often a prevailing article on such lands, and quantities of that may be had; but it would be better not to lay it on until the plants have attained some size, as it harbours slugs so much, and the quantity wanted is too great to allow of its being all scalded. Short grass will also do, or, in fact, anything that will check evaporation; the object being to keep the roots of the plants in a uniform moist, warm state; for it is a mistake to expect a good result where there is much difference between the top and bottom temperatures of the plants.

Besides the care necessary, as above, in encouraging a healthy growth, there is much advantage in having the best variety to cultivate. The *Bath Coss*, which is now issued under various names, is as good as any; but excellence depends on the care with which the variety has been kept from contact with others while seeding. Other local circumstances also affect it; but it is not a bad practice to sow several kinds at once, and mark the result. Most likely there will be a difference in their qualifications for resisting the temptation to run to seed. Sowing where they are to remain, as above, being, perhaps, the most important point to attend to; and if it could be done on the north side of a wall, so much the better. The shade of trees is hardly so good, for they often rob the plants by their roots as well as injure them by the shade they give them. Above all, use manure-water plentifully, and the result will hardly fail to be favourable.

It would be as well to remark here, that in the sowing of this crop in dry weather, recourse must be had to the watering-pot as well before the seed is put in as at any other time. A good watering of the ground before sowing, and shading after, will often coax the plants up with less detriment to the ground than when repeated waterings are obliged to be made after that operation is done. Be careful, also, to water well at all times when

the weather is dull or betokens rain, or, in fact, when it actually does rain, if the rain is not in sufficient quantity to reach the roots of the plants. Stir the earth between the rows whenever there is a chance to do so; and though necessity will often compel this crop to assume an untidy aspect, still let that be as little as possible;—a little management will assist in giving it an orderly look, notwithstanding the mulching matters and other things, which, more or less, disfigure it when its growth has to be maintained in such an artificial state.

J. ROBSON.

THE SPOILED CHILD.

(Concluded from page 165.)

I CLOSED my last paper with an admonition to my own sex; but the melancholy circumstances of poor Mrs. Campbell's married life will be more powerful than many warning words. They will lay bare the real nature of unholy marriages; what miseries are entailed by them; how hollow and deceitful fair appearances are, especially in such cases; and how bitterly woman suffers by allowing worldly motives and worldly considerations to actuate her in this momentous step. Sometimes, even care and circumspection cannot detect the cheat; but when folly, recklessness, or vanity blind the eyes, or stupify the mind, nothing can be expected but disaster. There is but *one* glass through which we can see clearly—which removes the film before our eyes, and displays every object in its right light. There is but *one* rule to square our actions by, whether they are great or small. This glass and rule will oblige us sometimes to do things very uncomfortable to our natural feelings, I know; but depend upon it, if we *do not* use them, we shall find the castle our own hands have built will fall upon our heads, and grind us to powder.

"From the moment of her marriage, Mrs. Campbell's happiness was gone. Young Campbell was, as might be expected, a brutish husband; selfish in the extreme, with no thought beyond the gratification of his own wishes. Soon after the marriage, the health of the bride appeared to give way; it was evident her husband was obnoxious to her, and that she regretted, when too late, that her firmness in refusing him had not been more resolute; and symptoms of rather an alarming nature began to show themselves. She was now rather more than twenty years of age; and on reaching her twenty-first birth-day, her large, unsettled property would become her husband's. No wonder, then, that he became anxious; that he consulted eminent physicians, and appeared to grieve when an unfavourable opinion was given. Still, there appeared, for some time, no immediate fear of a fatal termination; the disease was doubtless one of danger, but might, by appropriate remedies, be warded off for some years; and, in fact, by judicious nursing, and kind and gentle treatment, with mental quiet and repose, be altogether removed. But it was not so to be. Medicine, and medical treatment, indeed, she had; but where was she to look for sympathy and support in this world? To God, indeed, she might, and we hope did, apply for protection; but from her husband what could she expect? As time grew on she gradually became worse; it wanted but three months to her twenty-first birth-day, which, if she did not live to reach, her large property would pass away into a totally different channel, and her husband's anticipations would be utterly blighted. Every effort, therefore, was made by him to recruit her failing strength; every advice was sought that held out the slightest hope of success; physicians far and wide were consulted; but still she appeared sinking. Her eyes became more dim, her cheek more pallid, and her limbs became less and less able to support her tottering frame; till at last, just *one month* before the long-looked-for day, poor Mrs. Campbell sank into the grave, worn out by unkindness and deep distress.

"Is there not a lesson in this? Man may, indeed, lay deep schemes for worldly aggrandisement; he may conceive that his plans are so securely made that nothing can interfere with their happy consummation; but then comes the voice of the Lord uttering the tremendous 'Ichabod,' and

all his worldly wisdom is set at nought—his counsels are ropes of sand, and all his anticipations are destroyed! This surely was an instance of it.

"It is not uncharitable to suppose, from the peculiar circumstances of this unhappy marriage, that the widower did not deeply lay to heart the death of his wife for her own sake, but for that of her property. His parents, too, were both removed shortly after her decease; so that young Campbell was left almost at once standing alone in the world.

"From the period of his wife's death, the young man's unsatisfactory habits took a more decided turn. Intemperance, card-playing, and gambling, seemed to become necessary to his very existence. This kind of life led him into the society of horse-dealers and jockies—men, as a body, not remarkable either for the morality of their lives, or scrupulosity of dealing; and by them, doubtless, was "fleeced" of his ready cash to a very considerable extent. Again he married; and in this case, not, as I am aware, for any motive of gain; and his wife was, I believe, a respectable person in her position. The credit of an habitual gambler can never be great; whispers began to be heard that his solvency was doubtful, and caution in giving him credit began to be exercised by prudent tradesmen. At length he became seriously embarrassed, and it was evident to all that his affairs must speedily be adjusted through the Court of Bankruptcy. The probability of such a termination was abruptly brought to an end by a catastrophe which caused the most painful excitement in the town in which he resided. A bill was given by him in payment, which was accepted in the name of a firm of respectability, and was, consequently, unhesitatingly received by the party to whom it was given. The bill was returned dishonoured; application was made to the acceptors, and they at once pronounced their names a forgery. Armed with a warrant for his apprehension, the chief police agent repaired to his residence, and knocking at the door, requested an interview. Campbell, unconscious of the person who waited to see him in his sitting-room, shortly made his appearance, and stood aghast when he became acquainted with the purport of the call. Recovering himself, however, he requested leave to prepare his wife for the shock, and left the room, closely followed by the policeman. Turning abruptly round, he drew from his pocket a phial, which, before his captor could dash from his hand, he applied to his mouth, and swallowed its contents. One fearful groan, and all was over! The soul of the wretched Campbell stood in the presence of a pure and righteous God."

Reader! ponder the beginning and the end of a *spoiled child*! Mark each onward step in the road to ruin! Consider the horrors that attend the footsteps of guilt! Let the pure Word of Divine Wisdom close this tale of terror, and sink into every heart. "Chasten thy son while there is hope, and let not thy soul spare for his crying." "Train up a child in the way he should go, and when he is old he will not depart from it." "Bring them up in the nurture and admonition of the Lord."

"Rejoice, O young man, in thy youth, and let thy heart cheer thee in the days of thy youth, and walk in the ways of thy heart, and in the sight of thine eyes." Reader! mark the awful threat and consequence that follows—"But know thou, that for all these things God will bring thee into judgment." "Remember now thy Creator in the days of thy youth, while the evil days come not." "Put away from thee a froward mouth, and perverse lips put far from thee. Let thine eyes look right on, and let thine eyelids look straight before thee. Ponder the path of thy feet, and let all thy ways be established. Turn not to the right hand nor to the left: remove thy feet from evil. My son, attend unto my wisdom, and bow thine ear to my understanding."

THE BATH AND WEST OF ENGLAND AGRICULTURAL SOCIETY'S POULTRY SHOW.

THE Poultry Shows held in conjunction with the Annual Meetings of the above Society have been very successful in attracting visitors and procuring funds. At Plymouth, in 1853, the receipts were large; and at Bath, last year, Mr. Jonathan Gray, the Director of the Poultry Show, after

handing over a contribution of £1,000 to the fund for the relief of the widows and orphans of British soldiers who have lost their lives in the existing Russo-Turkish war, placed at the disposal of the Council of the Agricultural Society more than £450. The Show at Tiverton, on the 6th, 7th, and 8th instant, was of a character calculated to extend the reputation of its predecessors. The entries were not so numerous as they were at Bath, but, nevertheless, amounted to 354. The birds were shown in the excellent pens of the Society, which are roomy, lofty, square wood pens, with fronts of perpendicular bars. The pens were arranged in four rows in two light tents, the longest 210 feet long 37 feet wide, and the other 60 feet long and 38 feet wide. All the larger classes were in the first, and Bantams and Pigeons in the last-mentioned tent. On this occasion, Mr. Gray having, at the request of the Council, undertaken to provide the Society with permanent shedding adapted for exhibitions of live stock, poultry, implements, &c., and having erected a tent on a novel plan, which he has brought under the notice of the War and Ordnance Departments of the Government, as adapted for a campaigning army, the Poultry Show had only that energetic gentleman's occasional attention. The arrangements, however, were admirably carried out by the Directors, Samuel Pitman, Esq., T. Coulson Sanders, Esq., and J. E. Knollys, Esq., and Mr. John Kingsbury, of Taunton, the Hon. Secretary. Most of the classes of large fowls were well represented, and many pens of really first-rate birds. This remark applies more particularly to the *Spanish*, the *Game*, and the dark-coloured *Cochin-Chinas*. The whole of the *Hamburgh* classes mustered very strong in numbers, and of good quality. The least satisfactory part of the Show was the *Pigeons*. There were a large number of birds sent, but not many up to the high standard of excellence now looked for in exhibition birds.

We observed in several of the pens *diseased Birds*. It is impossible for the managers of an Exhibition of this sort, in placing the birds in the pens with the expedition that circumstances make necessary, to detect every diseased bird; but when observed, the pens to which they belong ought to be removed from the Exhibition, and the exhibitors disqualified from receiving any prize. If this were made a rule, many persons would be more careful than they seem to be in selecting birds for show. The judges must have had a difficult task to award the prizes in the *Hamburgh* Classes, from the extraordinary number of good pens exhibited. The best pen in the *Golden Spangled* Class, belonging to Mr. Hugo, of Exeter, was marked for sale at only £2 2, and was, of course, claimed on Wednesday morning; the fortunate buyer being F. Hicks, Esq., of Mount Plym, Plymouth. The first-prize pen in the *Grey Game* Class, which included a really splendid cock, superior to the hens, in shape and colour, were claimed at £10 10. Several other pens changed hands.

Another authority writes to us as follows:—

"This meeting has proved itself a most successful one; the competition in the classes generally was without precedent; consequently, the premiums were pretty evenly distributed among most of the principal poultry amateurs of the United Kingdom. The much-coveted principal prize, a valuable *Silver Cup*, for the best collection, after a close rivalry, was borne away by G. Atkins, Esq., of Birmingham, whose poultry were in the highest possible condition—a feature that in cases of equality undeviatingly tends to the advantage of their owner, and, therefore, should ever form one of the most desired aims of exhibitors generally; whilst it is one that but too frequently is altogether lost sight of where large numbers of poultry are confined to a somewhat limited space. The exhibition contained somewhat more than 350 pens; these were, however, as a whole, far beyond mediocrity; the entrance money, being five shillings per pen, would most probably tend strongly to produce this effect, and the almost total absence of indifferent specimens was the constant theme of congratulation among those most calculated to form correct opinions in such matters. Hence the difficulties to the judges, Mr. John Baily, of London, and Mr. Edward Hewitt, of Birmingham, in awarding the premiums, were unusually severe; and one of those gentlemen was heard to remark, "The trial was not confined to the

selection of the best pen alone, but also where to find an indifferent one."

The *Spanish* were very good, the first-prize birds not only being excellent in character, but also of superior size to most of our exhibition-birds of this variety; and when we state, that nearly all our principal breeders competed, our readers will perceive the rivalry that prevailed adds much to the honours of success. The *Dorkings* were fowls of great merit; and the prize chickens the forwardest we have yet seen of the present year, some of the larger ones weighing upwards of five pounds each. The *White Dorkings* were also very well represented. The *Buff Cochins* (adults) did not show to advantage, many having commenced their annual moult; still they contained many highly creditable specimens. In the Chicken Class, two different pens of otherwise excellent birds were very properly disqualified, from their owners (contrary to regulations) placing more than a single male bird in each pen. The *Partridge-coloured Cochins* were the best by far we remember to have seen. Here the Rev. G. F. Hodson, of North Petherton, Somerset, monopolized both first-prizes, in adults, and also chicken, with pens very carefully selected; the condition, too, all that could be desired. In this class we were much gratified to find the entries, so numerous as they are, naturally, a most useful and also hardy variety. The *White Cochins* contained some most extraordinarily well-developed specimens, but the presence of *green* legs proved a fatal obstacle to the success of several pens, otherwise in the highest degree meritorious—a failing that exhibitors should always carefully avoid, and which, though unfortunately common, cannot be too strongly repudiated. The *Bramah* class was not well supported, either as to quality or condition. The *Game*, contrariwise, were most excellent in all known varieties, and were much admired by the public generally. In Pen 95, which were "highly commended," we noticed a most superior male bird; but, unhappily, this pen's chances of success was much lessened by the presence of that very objectionable disease, called "cankers;" and which, by a little care on the part of owners, may be so easily prevented. The first-prize *Duck-wings* were superlatively beautiful, and undoubtedly one of the most ably selected in the whole exhibition. The *Malays* were unusually good, many very superior pens contested; and we can state with confidence, that so good a collection as a whole never before were exhibited at any of our public Poultry Shows. The *Hamburgh* classes were well represented in all their varieties; the almost total absence of "hen-tailed" cocks was remarkable; and the "moonings" of several of the *Golden Spangled* pens were perfection. The *Polands* presented the weakest point in the whole Exhibition, if we except a pen or two of white-crested ones. Perhaps it would be difficult to assign a reason for so manifest a deterioration from those exhibited at the meeting of this society last year. The *Extra Class* was rich in unusual varieties; among them were some excellent specimens of *Rangoons*, *Rumpless*, *Ptarmigan*, *Cuckoo-coloured Cochins*, and *Black Hamburgh Fowls*. The *Bantams* were not worthy of especial notice; the *Aylesbury Ducks*, on the contrary, have, perhaps, never been excelled—eight pounds each bird being the average weight of several of the rival specimens. The *Rouens* appear, in the present day, more difficult to procure. Here were no first-rate birds, though it is a well-ascertained fact, this variety of ducks are the most profit-producing of all the tribe, being, when purely bred, pre-eminent for early maturity, great size, and piquancy of flavour. The *Turkies* were marvellous examples of what excellence is attainable by care and attention, when not misapplied, though so late in the breeding season naturally would tell fearfully against such a result. The three birds (a cock and two hens) were in weight upwards of fifty-five pounds!—perhaps they have not ever been excelled, more especially as regards the truly gigantic size of the females. All the *Pigeons* mustered in abundance, and proved excellent in character. The competition was here universal, and the whole received the highest approbation of the Judges.

"The town of Tiverton on this occasion presented an unusual scene of gaiety and attractiveness, many hundreds of large Firs from the neighbouring woods being temporarily planted along each of the principal streets, whilst garlands of evergreens and flowers of all kinds were festooned across

the streets from the upper windows and roofs of the houses. All things proclaimed the general holiday; at daybreak, canons were fired in various directions; banners floated merrily in the breeze from every available height, and bands of music paraded the town on all sides. These arrangements tended not a little to excite the attention of the inhabitants generally; whilst every succeeding train brought crowds of anxious spectators from the surrounding locality, and although, from the extreme pressure of visitors in every available variety of vehicle, *pedestrians* were somewhat incommoded in their passage to the show field, more especially as the rain of the preceding evening had caused the road to present not the most favourable aspect for holiday gear, the greatest good humour prevailed, and the result (peculiarly considered) was all that could be desired. We are informed, that from the success of the late meeting the managing committee purpose an even still more liberal prize list for next summer. The care and general supervision of the Poultry during the Show was under the direction of Mr. W. Channing, of Exeter, and it gives us much pleasure to state, the duties of this arduous office were ably fulfilled. This we mention, from the fact of its vital importance to the *future* interests of any exhibition of Poultry; for, undoubtedly, amateurs, more especially the owners of the most valuable specimens, are altogether guided, as to future arrangements, by the care and attention displayed by committees generally to their favourites during their temporary confinement."

The following is

THE PRIZE LIST.

JUDGES.—Mr. Bailey, Mount-street, Grosvenor-square, London; E. Hewett, Esq., Sparkbrook, Birmingham.

Class 1.—SPANISH.—Cock and two Hens of any age.—Seven Entries.—First prize, Mr. Parsley, Rock Cottage, Bristol. Second prize, Mr. H. D. Davies, Spring Grove, Hounslow. Highly Commended.—Mr. J. Babbage, Paris-street, Exeter. Mr. J. R. Rodbard, Aldwick Court, Langford, near Bristol.

Class 2.—SPANISH CHICKEN.—Cock and two Hens (Chicken of 1855).—One Entry.—Mr. James Buckley, Llanelly, Carmarthenshire.

Class 3.—DORKING (Coloured).—Cockerel and two Pullets of 1855.—Eleven Entries.—First prize, Mr. H. D. Davies, Spring Grove House, Hounslow. Second prize, Mrs. Henry Fookes, Whitechurch, near Blandford. Highly Commended.—Mr. J. F. Pearse, Lower Slewton, Whimble. Mr. Edward Pope, Great Toller, near Dorchester, Dorset.

Class 4.—DORKING CHICKEN (Coloured).—Cockerel and two Pullets of 1855.—Five Entries.—First prize, Mrs. Rinder, Sussex. Second prize, Mr. H. D. Davies, Spring Grove House, Hounslow, Middlesex.

Class 5.—DORKING (White).—Cock and two Hens of any age.—Ten Entries.—First prize, Mr. W. Symonds, jun., Milbourne St. Andrew, Blandford. Second prize, Mr. F. J. Coleridge, Manor House, Ottery St. Mary. Highly Commended.—Mr. W. Manfield, jun., Dorchester.

Class 6.—DORKING CHICKEN (White).—Cockerel and two Pullets of 1855.—Two Entries.—Second prize, Mr. W. Manfield, jun., Dorchester, Dorset.

Class 7.—COCHIN-CHINA (Cinnamon, Buff, or Lemon).—Cock and two Hens of any age.—Fifteen Entries.—First prize, Mrs. Henry Fookes, Whitechurch, near Blandford.

Class 8.—COCHIN-CHINA CHICKEN (Cinnamon, Buff, or Lemon).—Cockerel and two Pullets of 1855.—Five Entries.—First prize, Mr. J. R. Rodbard, Aldwick Court, Langford, near Bristol. Second prize, Captain W. H. Snell, St. Swithin's Lane, London.

Class 9.—COCHIN-CHINA (Brown, Partridge, and Grouse).—Cock and two Hens of any age.—Nine Entries.—First prize, Rev. Grenville F. Hodson, North Petherton, Bridgwater, Somerset. Second prize, Mr. G. C. Adkins, West House, Edgbaston, Birmingham. Highly Commended.—Lord le Blaquer, Heath House, Petersfield, Hants.

Class 10.—COCHIN-CHINA CHICKEN (Brown, Partridge, and Grouse).—Cockerel and two Pullets of 1855.—Two Entries.—First prize, Rev. Grenville F. Hodson, North Petherton, Bridgwater. Second prize, Mr. Boughton Kingdon, Upper Paul-street, Exeter.

Class 11.—COCHIN-CHINA (White).—Cock and two Hens of any age.—Eleven Entries.—First prize, Mr. Cyrus Clark, Street, near Glastonbury. Second prize, Rev. J. H. Gandy, Old Cleeve, Taunton.

Class 12.—COCHIN-CHINA CHICKEN (White).—Cockerel and two Pullets of 1855.—Two Entries.—First prize, Mr. J. R. Rodbard, Aldwick Court, Langford. Second prize, ditto, ditto.

Class 13.—COCHIN-CHINA (Black).—Cock and two Hens of any age.—Three Entries.—Second prize, Mr. Cyrus Clark, Street, near Glastonbury.

Class 14.—BRAMAH POOTRA.—Cock and two Hens of any age.—Five Entries.—First prize, Mr. H. W. Davies, Spring Grove House, Hounslow, Middlesex. Second prize, Mr. R. H. Bush, Litfield House, Clifton.

Class 15.—GAME (White and Piles).—Cock and two Hens of any age.—Four Entries.—First prize, Rev. Thomas Lyon Fellowes, Beighton

Rectory, Acle, Norfolk. Second prize, Mr. Joseph Symonds, Gorwell, near Dorchester.

Class 16.—GAME (Black-breasted and other Reds).—Twenty-three Entries.—First prize, Mr. G. C. Adkins, West House, Edgbaston, Birmingham. Second prize, Mr. J. R. Rodbard, Aldwick Court, Langford. Highly Commended.—Mr. William Buncombe, Taunton. Mr. Nathan N. Dyer, Manor House, Bredon, near Tewkesbury. Mr. G. C. Adkins. Mr. Edward Farmer, Greet, Spark Brook, near Birmingham. (Very good class.)

Class 17.—GAME (Duckwings and other Greys and Blues).—Cock and two Hens.—Twelve Entries.—First prize, Mr. Robert Fookes, Milton Abbas, near Blandford. Second prize, Mr. W. V. Drake, Lockwood, near Huddersfield. Highly Commended.—Mr. Wm. Buncombe, Taunton. Commended.—Mr. J. R. Rodbard, Aldwick Court, Langford.

Class 18.—GAME (Blacks and Brassy-winged, except Greys).—Cock and two Hens.—Seven entries.—First prize, Mr. W. V. Drake, Lockwood, near Huddersfield. Second prize, Mr. Edward Farmer, Greet, near Birmingham.

Class 19.—MALAY.—Cock and two Hens.—Three Entries.—First prize, Mr. James Leighton, Cheltenham. Second prize, Miss King, Pyrland Hall, Taunton. Highly Commended.—Mr. James Leighton, Cheltenham.

Class 20.—HAMBURGH (Golden-pencilled).—Cock and two Hens.—Fourteen Entries.—First prize, Mr. Thomas McCann, Graham House, Malvern. Second prize, Mr. Josiah B. Chune, Coalbrookdale, Shropshire. Highly Commended.—Mr. John Marshall, Belmont, Taunton. Commended.—Rev. Lewis Gidley, Honiton. Rev. T. L. Fellowes, Beighton Rectory, Acle, Norfolk.

Class 21.—HAMBURGH (Silver-pencilled).—Cock and two Hens.—Seventeen Entries.—First prize, Rev. T. L. Fellowes, Beighton Rectory, Acle, Norfolk. Second prize, Mr. Edward Archer, Malvern. Highly Commended.—Miss Selina H. Northcote, Upton Pyne, near Exeter. Commended.—Messrs. Wood and Hollings, Horton, Bradford. Mr. James E. Marshall, Belmont, Taunton.

Class 22.—HAMBURGH (Golden-spangled).—Cock and two Hens.—Twelve Entries.—First prize, Mr. Walter Hugo, Albert Villa, Mount Radford, Exeter. Second prize, Rev. T. L. Fellowes, Beighton Rectory, Acle, Norfolk. Commended.—Messrs. Wood and Hollings, Horton, Bradford.

Class 23.—HAMBURGH (Silver-spangled).—Cock and two Hens.—Seventeen Entries.—First prize, Mr. Josiah B. Chune, Coalbrookdale, Salop. Second prize, Mr. Joseph Symonds, Gorwell, Dorchester.

Class 24.—POLANDS (Black with White Crests).—Cock and two Hens.—Five Entries.—First prize, Mr. G. C. Adkins, Birmingham. Second prize, Mr. Thomas P. Edwards, Lyndhurst, Hants.

Class 25.—POLANDS (Golden-spangled).—Cock and two Hens.—Thirteen Entries.—First prize, Mr. R. H. Bush, Litfield House, Clifton, near Bristol. Second prize, ditto.

Class 26.—POLANDS (Silver-spangled).—Cock and two Hens.—Thirteen Entries.—First prize, Mr. G. C. Adkins, Birmingham. Second prize, Rev. J. H. Gandy, Old Cleeve, Taunton.

Class 27.—SPECIAL PRIZES.—Cock and two Hens.—Ten Entries.—First prize, Mr. H. Davies, Spring Grove House, Hounslow. (Rangoon.) Second prize, Mr. T. L. Fellowes, Beighton Rectory, Acle, Norfolk. (Black Hamburg.) Highly Commended.—Rev. F. Trench, Southern Hill, Reading. (Ptarmigan.) Commended.—Mr. C. Beach, Shirley, near Birmingham. (Rumpless Single-comb with Ruffs.)

Class 29.—BANTAMS (Gold-laced).—Cock and two Hens.—Eight Entries.—First prize, Mr. G. C. Adkins, West House, Birmingham. Second prize, Mr. Thos. H. D. Bayly, Ickwell House, Bedford. Commended.—Mr. Thomas L. T. Rendell, Tiverton.

Class 30.—BANTAMS (Gold-laced).—Cock and two Hens.—Three Entries.—Second prize, Mr. Robert Loder, Crawley, Sussex.

Class 31.—BANTAMS (White).—Cock and two Hens.—Five Entries.—First prize, Mr. G. C. Adkins, Birmingham. Second prize, Mr. J. E. Mapplebeck, Birmingham.

Class 32.—BANTAMS (Black).—Cock and two Hens.—Four Entries.—First prize, Mr. Charles Ballance, 5, Mount Terrace, Taunton. Second prize, Mr. J. R. Rodbard, Aldwick Court, Langford.

Class 33.—DUCKS (White Aylesbury).—Drake and two Ducks.—Seven Entries.—First prize, Mrs. B. J. Ford, Ide, near Exeter. Second prize, ditto. Highly Commended.—Rev. J. H. Gandy, Old Cleeve, Taunton.

Class 34.—DUCKS (Rouen).—Drake and two Ducks.—Five Entries.—First prize, Mr. Charles Ballance, Taunton. Second prize, Mrs. Henry Fookes, Blandford.

Class 35.—DUCKS (Any other variety).—Drake and two Ducks.—Four Entries.—First prize, Mr. C. Ballance, 5, Mount Terrace, Taunton. (Buenos Ayres.) Second prize, Mr. C. Edwards, Brockley Court, Somerset. (Buenos Ayres.)

Class 36.—GEESE.—No Entries.

Class 37.—TURKIES.—Cock and Hen.—Four Entries.—First prize, Mr. J. R. Rodbard, Aldwick Court, Langford. Second prize, Mr. C. Edwards, Brockley Court, Somerset.

PIGEONS.

Class 38.—CARRIERS.—For best Pair.—Two Entries.—Prize, Mr. G. C. Adkins, Birmingham.

Class 39.—BARBS.—Six Entries.—Mr. Harrison Weir, Peckham, near London.

Class 40.—POUTERS.—Three Entries.—Mr. S. Summerhayes, Taunton.

- Class 41.—RUNTS.—Four Entries.—Mr. G. C. Adkins, Birmingham.
- Class 42.—FANTAILS.—Seven Entries.—Mr. G. C. Adkins, Birmingham.
- Class 43.—JACOBINS.—Seven Entries.—Mr. G. C. Adkins, Birmingham.
- Class 44.—TURBITS.—Eight Entries.—Mr. Edward H. Burge, Taunton.
- Class 45.—NUNS.—Three Entries.—Mr. Thomas Twose, Bridgewater.
- Class 46.—ARCHANGELS.—Four Entries.—Mr. G. C. Adkins, Birmingham.
- Class 47.—TRUMPETERS.—Six Entries.—Mr. Thos. Twose, Bridgewater.
- Class 48.—TUMBLERS.—Five Entries.—Mr. G. C. Adkins, Birmingham.
- Class 49.—VARIETY OF TUMBLERS.—Seven Entries.—Mr. E. H. Burge, Taunton. (Magpies.)
- Class 50.—OWLS.—Seven Entries.—Mr. Harrison Weir, Peckham, near London.
- Class 51.—DRAGONS.—Two Entries.—Mr. T. J. Cottle, Pulteney Villa, Cheltenham.

A SILVER CUP,

Value £5, offered to the competitors who won the greatest number of prizes, was accorded to Mr. G. C. Adkins, West House, Edgbaston, near Birmingham.

QUERIES AND ANSWERS.

GARDENING.

WHY DO NOT SEEDLING OAKS SPRING UP IN THE WOODS AT BELVOIR CASTLE?

"I have been asked by a gentleman of distinction, 'Why we do not find young Oaks springing up in the woods at Belvoir?'—a seedling being a great rarity; yet Ash and Sycamore are growing everywhere. Perhaps I ought to say that our Oak woods consist principally of trees from twenty to seventy years' growth. The ground much shaded by the tops. Mice do not at all abound; squirrels are destroyed to a great extent; the woods are inclosed, and the soil various. My own opinion not being considered satisfactory, I proposed asking the question through you, hoping I am in time for its appearance this week in that practical work, THE COTTAGE GARDENER.—ARBORIST, *Belvoir Castle*."

[We would not be dogmatical on this question. Very likely various reasons may in time appear. Seedling Oaks, self-sown, are common enough; but generally in woods where the weight of the acorn embedded it easily in soft leaf-mould, or moss, or heath. Seldom or never do acorns vegetate in ground so hard or so bare as to expose them to all the air and light which can get at them. The chief reason why, if the acorns fall in a favourable place for their germination, and yet no Oak saplings appear, is, in our opinion, because the acorns have been purloined. There may be few mice at Belvoir, and squirrels, and, perhaps, fewer rats; but we presume that there is no deficiency of crows, and pheasants and wood-pigeons. All these, not to speak of other animals, seek out acorns as one of their best feasts. So well do pheasants thrive upon acorns, that gamekeepers frequently interdict gathering them on this account.]

CAUSE OF CUCUMBERS GROWING FREELY.

"I am growing Cucumbers and Melons in frames heated by hot-water and steam, and I find the plants thrive and blossom well, and go into fruit, having, of course, been inoculated (This is not necessary), and the temperature kept at about 70° to 80° under the glass. All the heat and moisture—except now and then some liquid-manure—comes from the water under the beds; but the fruit grows very feebly, and without vigour, being crooked and thin, and reaches no size. The earth of the beds is about eight inches deep, and the space to the glass from the earth, fourteen inches in the centre. The shutters conveying the water round the pit are partially covered, so that the steam can escape; and the earth is laid on thin faggot-wood, across sleepers.

"What do you consider is the cause of their not thriving?—J. P. S."

[We have had fine weather lately; but if before the change you could keep up a temperature of from 70° to 80° in your pit, and all the artificial heat had to pass through the soil, and that soil was only eight inches thick, then we imagine the roots have scalded, and that a lower temperature at bottom, and five or six inches more earth will, in that case, remove the evil of which you complain.]

ILL-SUCCESS WITH HOYA BELLA AND MITRARIA COCCINEA.

"LINDA has a very fine plant of *Hoya Bella*, two years old, just coming into full bloom, but the plant is sickly, and looks dying, without any apparent cause, and other plants in this neighbourhood are doing the same. Is the above (two years) the length of life of this plant?"

"How can we induce *Mitraria coccinea* to flower?"

[There was a short article on *Mitraria coccinea* at page 249 of our last volume; the writer of that article has several times succeeded, and several times failed. It seems a rather troublesome subject, and we shall be obliged by any of our readers sending us particulars for its successful culture.

There was a notice of *Hoya Bella* the other week, page 123 of our present volume. We have no reason to think the plant short-lived. Are you sure that the plant was neither too cold nor too wet in winter? and that the drainage and the water supply are all right now?]

CONSTRUCTION OF A HOTHOUSE.

"I am about to erect a hothouse, thirty-five feet long by sixteen feet wide, with a span-roof, and light rafters seventeen inches apart.

"Mr. Fish says, two-and-a-quarter inches by three-and-a-half are strong enough for rafters thirteen feet long, without support. Will not nine-foot rafters give a good inclination to the above house, as it is not for early forcing; and if so, would not bars of two inches by three, or even one-and-a-half by three, be strong enough, if kept in their places by strips of wood screwed to each rafter half way between the ridge and the wall-plate at the top of the upright glasses? Shall I put iron columns to support the ridge? and if so, will five be enough? I propose giving air by means of five glazed slides, at the north side of the ridge, seventeen inches square, five wooden slides one foot from the ground on the south side, and five on the north side, all of the same size; and to place fly-wire over them to exclude wasps. Will this give me air enough?

"Will sheet-glass, eighteen inches by eighteen, and fifteen ounces to the foot, be strong enough? if not, would you name a better sort?

"I propose having a saddle-boiler, three-and-a-half feet long by two-and-a-half feet wide, fifteen inches from the bars to the top of the inside; but I cannot see in any of your articles how high it should be from the top of the inside to the top of the outside, as I want to ripen *Muscats of Alexandria*, &c., on the south side of the house, and *Hambro's*, &c., on the north; but not to begin forcing until the 1st of March. Will this boiler be a proper size for my purpose? and should there be a flow and return pipe on the south side of the house only; or should there be a flow and return all round? and if all round, should it be four-inch, or three-inch?

"The stock-hole must be to the east of the hothouse; and to the west of the hothouse I shall have a greenhouse, sixteen feet square. Can I warm this a little in frosty weather without warming the hothouse? And as this house is also span-roofed, could you suggest a sort of opaque glass for the south side and west end that would be advantageous to the plants, in moderating the rays of the sun, and yet would not prevent my having a few very late Grapes on the rafters?

"I propose airing this house in the same way as the hothouse.

"May I have a door out of the stock-hole into the hot-house, if well-made?"

"What kind of fuel should be used?—AN OLD SUBSCRIBER."

[See an article to-day, by Mr. Fish. A nine-foot rafter will give you an elevation of about four feet above the half flat; and that will be enough, though the roof will be somewhat flat. The bars we should like to be at least three by two inches. Five iron pillars will be sufficient. The mode of giving air is admirable; and you will have enough, unless in extra bright weather, when you could open the door. The sheet-glass will do—quite strong enough for your bars. Should you think of twenty ounces to be safe from hail, you must increase the size of the sash bars. The saddle-boiler will do. There is no occasion for having much space for water at the crown of the boiler—a few inches will do as well as ever so much. If there is to be much work, we would prefer a brick higher from the bars to the crown of the boiler. We have no doubt of your ripening *Muscats* on the south side of the house, but have doubts as to the *Hambro's* on the north side. A span-roofed house for Grapes we should like to stand north and south, so as to have an east and west side. The flow and return pipe must go all round, and should be four-inch pipe. From the position of the stock-hole, you cannot heat the greenhouse without heating the forcing house, unless you take pipes to it direct from the boiler through the ground to the greenhouse, and thus so far lose heat. If you placed your stock-hole between them, you could heat either one separately at pleasure. Hartley's ribbed glass would look best in such a position—and there are many varieties of it; other rough glass would do, but would look coarse. Crown glass would answer—daubed slightly with glue and whitening, and washed off in winter, as mentioned to-day.

It will be very useful to have a door out of the stock-hole into the house; and if there is a shed over it, it would be a useful place for working and potting in bad weather. Care must be taken that no dust gets into the house. If the boiler is well set, and at the height mentioned, you may burn anything burnable. If smoke is objectionable, you must think of coke and Welsh coal.]

JOSLIN'S ST. ALBAN'S GRAPE.

"I have a Vinery here, half of which is planted with the *Joslin's St. Alban's Grape*, and the other half *Black Hamburgh*. The family inform me, that there never has been a bunch of the *Joslin's St. Alban's* fruit for using, owing to their bursting in the ripening. Perhaps you will be kind enough to inform me, in an early number of THE COTTAGE GARDENER, how I am to proceed so as to remedy the evil as much as possible? and also the sorts of vegetables to crop the Vinery borders with, to take the smallest amount of nourishment from the Vines?—T. M."

[We have had considerable experience, unfortunately, with this, or a similar Grape. We could have succeeded pretty well could we have secured the necessary means of success; and these, in our opinion, are, removing, by the time the Grapes are half-swelled, every plant from the house that wants watering. Keeping a dry atmosphere about the Grapes. Giving them air, night and day, without injuriously lowering the temperature; and in all wet weather placing sashes over the ground containing the roots, to prevent it being soaked, especially after the last swelling of the berries is proceeding. Moisture in the house, a close atmosphere, or a moderate degree of rain at the roots at that period, will crack the berries to a certainty. We never mean to grow this Grape again until we can give it a small greenhouse to itself, and secure to it the conditions we have particularised. Where these have been secured, the berries were of a surpassing flavour and uncracked.

The best mode of cropping Vine-borders is to leave them uncropped. The next best is, any light summer crop of short duration.]

ASPECT FOR A MIXED GREENHOUSE AND VINERY.

"Wishing to build a small Greenhouse to be used both for Vines and Flowers, I shall be obliged by your answering the enclosed question as a guide.

"Which position would be the best for a Greenhouse, that facing S.S.E., or that facing W.S.W.?"

"What Vines would you recommend under such circumstances; bearing in mind, I intend having hot-water pipes to keep the plants in winter?"

"It must be a lean-to roof.—VINEFLOWER."

[We think it signifies very little which position your Greenhouse occupies of the two mentioned, though for Vines we would prefer W.S.W. We would not, however, place the house in a corner, if it could be avoided, but in the centre of either of the respective walls. Give glass ends to the Greenhouse, and thus you will obtain more light, which will tell alike on plants and Vines. The best Vines for such a house are the *Black Hamburgh*, *West's St. Peter*, and *Royal Muscadine*, and one *Dutch Sweet Water*, at the warmest end of the house. This last-named Vine will yield you Grapes a month before the rest.]

VENTILATORS AND GLASS FOR A SMALL GREENHOUSE.

"Will you inform me what ventilators are best for a lean-to Greenhouse, on the rafter (without sashes) system, and about the cost of them? Please also inform me if you prefer Hartley's Patent to clear glass for roofing a greenhouse; and if so, why? And if you prefer clear, please advise me whether to use sheet, crown, or plate-glass. Also, what sort of ventilators are best for the brickwork in the front and sides of the house.—W. F. G."

[For a very neat house, small, neat sashes, nine inches wide, and of a length to go between two rafters—say eighteen inches or thirty-six inches, according to the width of one or two,—look best. Wooden ones would do just as well, only they don't look so well. They are best hung on pivots. Some such houses have a double ridge-board strung above the ridge, and the airing boards are placed in the middle of the house beneath them. Being horizontal when in their places hung on pivots, a string makes them vertical, or just as little as you like; and thus there is free air without wet. The advantage of Hartley's Patent Glass is, that it saves shading, excluding so far the heating rays, and yet admitting enough of the light-giving ones. We are satisfied with British Plate, though we must speak the truth about Hartley's, so far as we know. For an ornamental house, we prefer Crown for the fronts and ends, unless there are reasons for having it shaded or ribbed. Wooden ventilators are best for the front. Any size will do,—eighteen inches by twelve is a good one: they should open opposite to, or close to, the heating medium. Close wire over the opening inside would prevent the entrance of vermin.]

IS THE ARUM MACULATUM, WHEN DRIED, INJURIOUS TO ANIMALS?

"Will you inform me if the presence of the wild *Arum*, ("Lords and Ladies," as the plant is called by children) amongst mowing grass, will make the hay poisonous for cows and horses? This grass grows in an orchard of Apple-trees, and is very luxuriant, though rather too yellow with Buttercups. Please inform me, at the same time, what would be the best plan to get rid of the *Arum*.—A CONSTANT READER, *Stroud*."

[Arums and other Arads abound with acrid poison, as well as with the most wholesome food. Our own "Lords and Ladies," Cuckoo Pint or Wake Robin (*A. maculatum*), is among the number. A great part of the *Sago* which is sold in London is made from the roots of this very plant. It is often called *Portland Sago*, from the circumstance that the people in the Isle of Portland eat largely of it, and manufacture it for the London market. Moreover, the

leaves of the plant, by being dried, lose their acridity, therefore your cows and horses are as safe from "Lords and Ladies" as if there were none of them in the land. If you want to get rid of these Arums, you must dig or spud them up by the roots every spring, till the land is cleared of them.]

SOWING CAMELLIA AND CALCEOLARIA SEED.— MANAGEMENT OF *DIELYTRA SPECTABILIS*.

"Will you inform me of the right time and mode of sowing *Camellia* seed? Also, the management of the seedlings afterwards? Likewise, I wish to be informed of the management and propagation of *Dielytra spectabilis*, and the time to sow *Calceolaria* seeds.—A BIRMINGHAM AMATEUR."

[Sow *Camellia* seed in October, or as soon as it is ripe. Use the same kind of soil as you would for a Geranium. Keep the pot from the frost, and the plants will appear next April or May; then the pot must be looked after very carefully all that summer; and by that time twelve-months the seedlings will be ready to pot off; but they will be Chinese, to the last leaf—that is, slow and sure—very different from Birmingham progress; and some years after they are potted off a few of them will begin to flower; some may flower sooner; but others much later.

The management of *Dielytra* is this;—to be planted out in good ground, such as would suit Gooseberries; and to dig up the old plants every third year, either in February or March. Divide the roots as you would Dahlias, or Rhubarb; to pot some of the pieces to flower in-doors, and earlier, and to plant out the rest. Of course you know that the *Dielytra* is as hardy as Lancashire Gooseberries.

For sowing *Calceolaria* seed, the first week in August is the best time in the whole year. Sow very thinly, in light soil; keep the plants a little damp, but always let them have air. In October, they will be ready to transplant—four or six in a small pot; and early in the spring pot them singly.]

STRIKING CUTTINGS OF GERANIUM CITRIODORA MINOR.—EFFECTS OF LAST WINTER NEAR DUBLIN.

"I shall be much obliged if you can tell me the name of this Geranium, and how it is best propagated. We have tried it; several cuttings made very short, set round a pot, in hazel-loam and silver-sand, placed in a hotbed. And also, in the same way, round a pot of water (Fyffe's method), which we found most successful with *Verbena (Aloysia)*, and Myrtle, but neither modes seem to suit this, for we did not get more than one out of a score to strike. It is so peculiarly sweet-scented, we wish much to get a few new plants, as we have but one, which is very old.

"You desire to know how various shrubs and plants, outdoor, have got over the winter.

"Here, three miles south of Dublin, half a mile from the sea, on the slope of a hill facing the East, but well sheltered by high garden-walls and tall trees, the following plants lived, *entirely* unprotected; they died down to the roots; but are now growing strongly, and six to ten inches high. *Fuchsias*—*Napoleon*, *Igneae*, *Comte de Beaulieu*, *Voltigeur*, *Corallina*, &c., &c. *Zauschneria Californica*, *Cheiranthus Marshallii*, protected with leaves. We have the *Dielytra spectabilis*, a splendid plant, loaded with bloom.—(It is as hardy as your national Shamrock.)

"We had killed, a very fine six-year old *Acacia dealbata*, which was upwards of twelve feet high; it was protected with leaves about the root. Also killed, *Veronica speciosa*, and *V. Lindleyana*; a large old *Brugmansia Knightii*, and *Baccharis Halimifolia*.—CARIG CATHOL."

[The name of your sweet Geranium is *Citriodora minor*; and the reason why you found it so hard to strike is, that every little morsel of a shoot flowers through the summer, and roots not when it is in a flowering condition. If you begin with it early in the spring, long before the flower-buds are formed; every little bit of it will root as easily as any of them. It will also root in August, under a handglass, out-of-doors; and so will *Unique*, which is of the same habit of not rooting by flowering wood.]

INSTANCE OF CATTLE POISONED BY YEW LEAVES.

As a caution to the public, allow me, through the medium of your valuable Journal, to mention an unfortunate occurrence which came under my notice a short time ago. Whilst engaged in the renovation of a fine old place (Weston Hall, in Wharfedale, originally the seat of the Vavasour family), I, unfortunately for two fine heifers, removed the protection from some splendid old Yew-trees, in order to throw them into the open park; for, not long after the removal of the fencing, these two heifers, whilst feeding with others, got to one of the Yew-trees, and eat so voraciously of it that their death was the consequence. There could be no mistake as to the cause of death, for the contents of the animals' stomachs were analyzed, and the cause clearly ascertained. Now, though this is the first time I have had actual proof of mischief resulting from the want of protection to Yews, yet I remember, some years ago, a gentleman cautioning me against leaving some of his unprotected, when I was altering his pleasure grounds. But I must confess, though I took care to protect the Yews as I was desired, the caution made no great impression upon my mind at the time, for I had repeatedly seen Yews left quite open to cattle of all kinds in cultivated places. And, indeed, it is indigenous to the hills in the Lake districts, and yet I had never known any injury, much less any fatality, arising to cattle from feeding on it. The case, however, mentioned above, proves, beyond a doubt, the poisonous properties of the Yew; and I trust it will serve as a caution to all landed proprietors and breeders of stock who may have Yews on their estates and farms, and induce them forthwith to have them fenced off either with strong wire or light iron-work.

In conclusion, I would just remark, that had not the pasture been very bare of herbage, and the tree, suddenly introduced to the hungry cattle, been unusually green and healthy, the probability is, I think, that they would not have been induced to feed on it; and yet, for all this, after the fatal case above alluded to, I would not have a single tree of the kind left unprotected; for, as it is certain that cattle will eat the Yew, every one should guard against the danger, for no one knows where the misfortune may occur next.—JOSHUA MAJOR, *Knosthorpe, near Leeds*.

DESTROYING WORMS.—MANAGEMENT OF CYCLAMENS.—HOW NEMOPHILA SHOULD BE SPELT.

Is there anything which will destroy worms in a bed without injuring the plants? I have a bed of transplanted annuals which has been almost ruined, in consequence of so many of the plants having been drawn into the ground by the worms. [Soak the bed once a week with lime water, until the annuals have grown out of danger.]

My *Cyclamens* have not bloomed this year. They have been managed exactly according to the directions given in THE COTTAGE GARDENER of February, 1854. They budded, and the buds withered away. Meanwhile, they made many and strong leaves. They were kept on a shelf of the stage in a greenhouse, and were liberally supplied with water, but were never drowned. They are now turning off yellow, but the corms are well and healthy. [They will bloom next year. They had been ill-ripened, so that the corms could not sustain the flowers. Continue to manage as we directed.]

In your last number are some fair remarks, signed "Fillingham," on miss-spelling the names of plants. These remarks you yourselves endorse. But allow another "Clergyman and Amateur Gardener" to make some further observations on the same subject.

In the *Cottage Gardeners' Dictionary*, page 631, there is an article on the *Nemophila* (so spelt). The derivation of the name there given, is "from *nemos*, a grove, and *phileo*, to love, from an erroneous idea of their place of growth." If I now find fault with the incorrectness of this derivation, at least let me bear my testimony to the ingenuity of it. But, let me suggest that *nemos* (not *nemos*) is the Latin for a grove, and *φιλέω* (*phileo*), the Greek for I love.

So that, at best, this precious word is a Græco-Latin monster. But I well remember when this flower was first introduced as an annual—1833 is the date given for the *N. insignis*, which is, perhaps, the most common. Its name in those days used to be *Nemophylla*, derived, I imagine, from *νέμω* (*nemo*), to distribute, and *φύλλον* (*phylon*), a leaf, probably from the spreading habit of its growth. It seemed good, however, to divers fine ladies, to lay the accent on the second syllable, instead of the third, and the poor *Nemophylla* became fine-lady-ized into *Nemo'phylla*; and then, of course, as the absurdity of the pronunciation became felt, its *spelling* had to give way, and to appear as *Nemo'phila*. And now, of course, people are obliged to cast about for some monstrous derivation to support a monstrous word. Many others of the same kind might be found; but this is, perhaps, one of the best samples of the effects of arbitrary pronunciation.—H. G. M.

ROYAL BOTANIC SOCIETY'S EXHIBITION REGENT'S PARK.—JUNE 13TH.

We purpose giving a fuller report of this exhibition next week, but at present will place before our readers the following from the *Morning Herald* :—

This flower-show was of the usual profuse and magnificent kind. The weather, however, was sadly unpropitious, and the thousands of gaily-dressed fashionables who were present were more than once driven for shelter into the large conservatory, and into the tents containing the flowers and fruits. Between the showers the military bands played with their accustomed excellence, but the enjoyment was terribly interfered with by the rain, which, though only occurring at intervals, necessarily chilled the air, and rendered the gardens anything but fit or pleasant for promenading.

The following were amongst the visitors present :—The Duchess of Cambridge and the Princess Mary of Cambridge, the Countess de Neuilly and the Duc D'Aumale, the Princess Adelaide of Hohenlohe and the Princess Feodore of Hohenlohe, the Duchess of St. Alban's, and the Countess of Bradford; Ladies Enfield, Dacre, Stirling, Cavendish, MacLaine, J. Lushington, Macfarlane, Peto, Willoughby de Broke, Fellows, Burton, Buchan, Hamilton, Barron; the Bishop of Winchester, the Marquis of Bristol, Lord Panmure.

The following is the list of prizes awarded :—

Extra Gold Medal.—Mr. May, gardener to H. Colyer, Esq., Dartford, Kent, for 16 *Stove and Greenhouse Plants*; and Mr. Williams, gardener to C. B. Warner, Esq., Hoddesdon, for 20 *Exotic Orchids*.

Large Gold Medal.—Mr. Barter, gardener to J. Bassett, Esq., Stamford-hill, for 16 *Stove and Greenhouse Plants*; and Mr. Wooley, gardener to H. B. Kerr, Esq., Cheshunt, for 20 *Exotic Orchids*.

Medium Gold Medal.—Mr. Green, gardener to Sir E. Antrobus, Bart., Cheam, for 16 *Stove and Greenhouse Plants*; Messrs. Fraser, Leyton, for 12 *Stove and Greenhouse Plants*; Mr. Frost, Preston Hall, Maidstone, for 10 *Stove and Greenhouse Plants*; Mr. Hume, gardener to R. Hanbury, Esq., Poles Ware, Herts, for 20 *Exotic Orchids*; Messrs. Veitch, Chelsea, for 16 *Exotic Orchids*; Mr. Gedney, gardener to Mrs. Ellis, Hoddesdon, for 12 *Exotic Orchids*; and Messrs. Lane and Son, Berkhamstead, for 10 *Roses in Pots*.

Gold Medal.—Messrs. Rollison, Tooting, for 12 *Stove and Greenhouse Plants*; Mr. Taylor, gardener to J. Coster, Esq., Streatham, for 10 *Stove and Greenhouse Plants*; Messrs. Rollison, Tooting, for 10 *Cape Heaths*; Mr. May, gardener to H. Colyer, Esq., Dartford, for 8 *Cape Heaths*; Messrs. Rollison, Tooting, for 16 *Exotic Orchids*; Mr. Clarke, Hoddesdon, for 12 *Exotic Orchids*; Mr. Turner, Slough, for 12 *Pelargoniums*; Mr. Nye, gardener to E. Foster, Esq., Clewer Manor, for 10 *Pelargoniums*; and Messrs. Paul and Son, Cheshunt, Herts, for 10 *Roses in Pots*.

Large Silver Gilt Medal.—Mr. Rhodes, gardener to J. Philpot, Esq., Stamford-hill Hall, for 16 *Stove Greenhouse Plants*; Mr. Cuthush, Barnet, Herts, for 12 *Stove and Greenhouse Plants*; Mr. Peed, gardener to E. Tredwell, Esq., Norwood, for 10 *Stove and Greenhouse Plants*; Mr. Williams, gardener to Miss Traill, Bromley, for 6 *Stove and Greenhouse Plants*; Messrs. Fraser, Leyton, for 6 *Greenhouse Azaleas*; Mr. Keele, gardener to J. Butler, Woolwich, for

12 *Exotic Orchids*; Mr. Green, gardener to Sir E. Antrobus, for 6 *Exotic Orchids*; Mr. Dobson, Isleworth, for 12 *Pelargoniums*; Mr. Holder, gardener to the Rev. E. Coleridge, Eton College, for 10 *Pelargoniums*; Mr. Francis, Herts, for 10 *Roses in Pots*; Mr. Terry, gardener to Lady Puller, Ware, for 6 *Roses in Pots*; and Mr. McEwin, gardener to the Duke of Norfolk, for a *Collection of Fruit*.

Large Silver Medal.—Mr. Morris, gardener to Coles Child, Esq., Bromley, for 6 *Stove and Greenhouse Plants*; Mr. Grix, gardener to S. Palmer, Esq., Cheam, for 6 *Tall Cacti*; Messrs. Fraser, Leyton, for 10 *Cape Heaths*; Mr. Williams, gardener to Miss Traill, for 8 *Cape Heaths*; Mr. Roser, gardener to J. Bradbury, Esq., Streatham, for 6 *Cape Heaths*; Mr. Taylor, gardener to J. Coster, Esq., for 6 *Greenhouse Azaleas*; Mr. Summerfield, gardener to C. Venn, Esq., Islington, for 6 *Exotic Orchids*; Mr. Bousie, gardener to Hon. H. Labouchere, for 6 *Fuchsias*; Mr. Turner, Slough, for 6 *Fancy Pelargoniums*; Mr. Weir, gardener to J. Hodgson, Esq., Hampstead, for 6 *Fancy Pelargoniums*; and Mr. Turner, Slough, for 6 *New Pelargoniums*.

TO CORRESPONDENTS.

CALCEOLARIAS (*W. B. Jeffris*).—They are all good, but No. 6, orange laced with crimson, is one of the most beautiful in colouring, as well as excellent in form, we ever saw. No. 3, crimson netted with yellow, is also very superior.

TERMS USED BY GARDENERS (*W. H. F.*).—Buy THE COTTAGE GARDENERS' DICTIONARY, you will find them there explained. *Mulching* is covering the surface of the soil with litter, or manure, to keep in the moisture. *Stopping* is nipping off the end of a shoot. *Disbudding* is removing such buds as would produce shoots in wrong places.

TULIPS (*J. L. Phelps*).—We do not know either. They are both bad as florists's flowers.

INSECTS ON ROSE-TREES (*H. H.*).—Those sent, and said to nibble the leaves of the Roses, are *Haltica ærata*, a Flea-Beetle, closely allied to that which is so disastrously known as the Turnip Flea, *Haltica nemorum*. Water impregnated with sulphuretted hydrogen, obtainable at most gas works, and diluted with eight times its bulk of clear water, syringed over the Roses in the evening, would, probably, be a preservative.

PEACH-TREES. (*A Constant Reader*).—They seem trained correctly; but we could not say so with certainty unless we saw them. There is no mode of insuring a crop of Peaches and Nectarines, but by giving them a glass shelter.

NAME OF PLANT (*Ambrosus*).—Your shrub is *Pyrus intermedia*.

SEEDS (*R. Lawrenson*).—No. 1. *Pinus excelsa*. No. 2. *Cedrus Deodora*. No. 3. *Pinus Gerardiana*.

POISON OF THE TOAD.—S. W. S. says :—"I have no doubt the cat referred to by your correspondent 'S——', Wolverhampton, was poisoned by biting the toad; the venom is secreted under the pustules or pimples of the toad's skin."

POULTRY SHOWS.

AGRICULTURAL SOCIETY'S (Royal) at Carlisle. July 23rd, and following days. Sec., J. Hudson, Esq., Hanover Square, London.

AIREDALE, at Shipley, 14th of August. Secs., J. Wilkinson, Esq., and J. G. Hyslop, Esq.

BEDFORD. November. Secs., J. T. R. Allen, Esq., and F. A. Lavender, Esq.

BIRMINGHAM. 11th to 14th of December. Sec., J. Morgan, jun., Esq.

DEWSBURY. 24th August. Secs., R. R. Nelson, Esq., and J. Newcome, Esq.

DORCHESTER. 24th and 25th of October. Sec., J. G. Andrews, Esq.

DURHAM AND NORTH YORKSHIRE, at Darlington, 6th and 7th of December. Sec., J. Hodgson, Esq.

EXETER. June 28th and 29th. Sec. Mr. Gray, Cathedral Yard, Exeter.

HEXHAM. 14th and 15th of May. Secs., Mr. W. Turner, Hexham, and Mr. J. Bell, High Shield.

HULL AND E. RIDING. June 27. Sec. B. L. Wells, Esq., Bishops Lane, Hull.

KEIGHLEY. September 5th. Sec., Wade Smith, Esq., Keighley.

LINCOLNSHIRE (NORTH), at Boston, July 26th. Sec., J. Hett, Esq., Brigg, Lincoln.

NOTTINGHAMSHIRE, at Southwell, 19th and 20th of December. Sec., R. Hawksley, jun., Esq., Southwell.

PARIS. June 1st to 9th. Application to be made to the Minister of Agriculture, 78, Rue de Valenciennes, Faubourg St. Germain, Paris, or to E. Herbert, Esq., Consul General of France, King William-street, London.

PRESCOT. July 4th. Sec. Mr. J. F. Ollard.

SOVERBY BRIDGE. Sept. 14th. Sec. Mr. F. Dyson.

THORNE. June 20th. Sec. R. S. Jewison, Esq.

TOTTINGTOWN. August 17th. Sec. Eli Roberts, Esq.

WINDSOR. 27th, 28th, and 29th of June. Secs., T. Chamberlain, Esq., and H. Thompson, Esq., Thames Street, Windsor.

YORKSHIRE AGRICULTURAL SOCIETY'S, at Malton, 1st and 2nd of August. Sec. Mr. John Hannam, Kirk Deighton, Wetherby.

N.B.—Secretaries will oblige us by sending early copies of their lists.

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WEEKLY CALENDAR.

D M	D W	JUNE 26—JULY 2, 1855.	WEATHER NEAR LONDON IN 1853.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day o' Year.
			Barometer.	Thermo.	Wind.	Rain in Inches.						
26	Tu	Lampyrus noctiluca.	29.690—29.651	68—48	S.W.	—	46 a 3	19 a 8	1 1	13	2 23	177
27	W	Dasytes flavipes.	29.790—29.725	65—49	S.W.	17	46	19	1 20	13	2 35	178
28	Th	QUEEN VICTORIA'S COR. 1838.	29.649—29.611	68—43	S.W.	06	47	19	1 49	14	2 48	179
29	F	St. PETER.	29.615—29.590	71—41	S.W.	—	47	19	rises.	☺	3 0	180
30	S	Malachius ruficollis.	29.803—29.666	70—51	W.	44	48	18	9 a 41	16	3 12	181
1	SUN	4 SUNDAY AFTER TRINITY.	29.918—29.878	64—49	W.	02	III	VIII	10 19	17	3 23	182
2	M	Conocephalus griscus.	29.949—29.876	69—55	S.W.	02	49	18	10 47	18	3 35	183

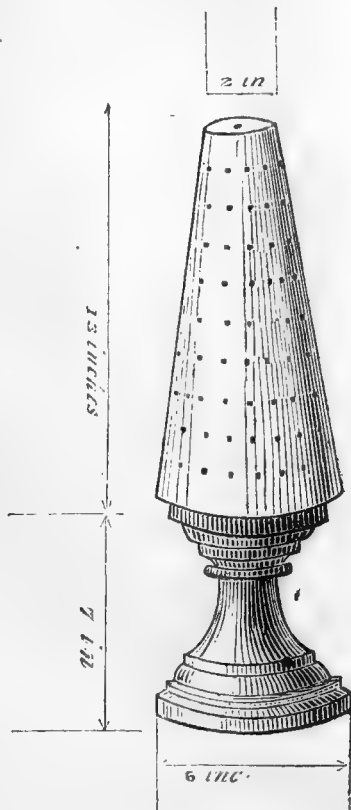
METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 72.7°, and 51°, respectively. The greatest heat, 93°, occurred on the 27th, in 1826; and the lowest cold, 35°, on the 30th, in 1849. During the period 115 days were fine, and on 81 rain fell.

In all artistic compositions, to be most pleasing to the eye, the figures must be arranged so that the outline of the whole approaches to that of a pyramid—the most important figures being the loftiest, and in the middle, and the subordinate figures gradually lower on each side. This is a rule so universal that bouquets are not excepted from it.

To form with facility a good pyramidal bouquet, hitherto, has been a very difficult task. The central flowers, if to be arranged in a vase of water, either had to be so long-stalked that but few flowers were fitted for the place of honour, or such large portions of the plant giving them birth had to be cut off as completely to disfigure it. As a further ill consequence, so many flowers were required to form a table-bouquet that it became either a very expensive ornament, if purchased, or very inconvenient to supply from home growths, unless plants were specially grown for the purpose.

As flowers have become a very fashionable table decoration, many plans have been proposed to economise the consumption of flowers employed for their formation, but the only one who has succeeded is Mr. Daniel Stead, Gardener, Marsh Grove, Huddersfield.

The following drawing will give a better idea of his *Pyramidal Bouquet Stand* than any description we can employ.



The upper portion is a metal cylinder pierced with holes all round, each of which have to be supplied with water poured in at the single hole at the top. The ingenuity of the contrivance is in having all the holes from the top to the bottom supplied with water. This we can assure our readers is effected; and as each hole is large enough to admit a flower stalk, and the water is close up to each hole, we need not do more than point out the great saving of flowers which is thus accomplished, for those with very short stalks can be here employed.

We recommend it to all our readers who can afford the outlay, and an advertisement elsewhere in our paper to-day tells where it can be obtained.

"I HAVE often," says Boswell, "amused myself with thinking, how different a place London is to different people. They whose narrow mind is contracted to the consideration of some one particular pursuit, view it only through that medium. A politician thinks of it merely as the seat of government in its different departments; a grazier as a vast market for cattle; a mercantile man as a place where a prodigious deal of business is done upon 'Change'; a dramatic enthusiast as the grand scene of theatrical entertainments; a man of pleasure as an assembly of taverns. But the intellectual man is struck with it as comprehending the whole of human life in all its variety, the contemplation of which is inexhaustable."

Now that the Crystal Palace at Sydenham has added one great attraction to the lovers of gardening, it may be interesting to many who have not visited London for several years, and to others who may be strangers in the great Metropolis, to know how they could most advantageously spend a few days in pursuit of their favourite amusement.

For the successful management of the various productions required at his hands, a gardener is always pondering on the best methods to be adopted to provide for each particular plant, fruit, or vegetable; the constituents necessary to advance it to the highest state of perfection. Gardening has progressed to its present position by a series of experiments; one gardener improving upon the experiments of another, until the whole of the art has now become practice founded upon well-attested facts, and to be still further advanced

by a more extensive knowledge of experimental philosophy.

An amateur, or gardener, should avail himself of every opportunity to visit other gardens, although there may not be many worthy of notice in his immediate neighbourhood. Nevertheless, a person desirous to obtain information will always see something from which he may derive profit, either from the successes or failures of others. But to ensure a certain increase of new ideas to his stock of knowledge, he must, if possible, extend his visits to some places distinguished for the most modern and improved practices in gardening. And we believe that it is justly and generally admitted, that the neighbourhood of London affords greater facilities for such useful investigations than the neighbourhood of any other city in the United Kingdom, or, probably, in the world. In some places he will see much to admire, and, most probably, some things inferior to what report led him to expect. The departments of gardening are numerous; a partiality or bias is entertained by one gentleman for the cultivation of some particular things to which his taste, limited means, or other circumstances may confine him; another is only inquisitive about the cultivation of some tribe of plants, fruits, or vegetables, to which some little success has flattered him into a great partiality for such productions; and another devotes his attention to the cultivation of what are called florists' flowers. Every such place contributes to the general advancement of gardening.

A visit to other places expands the ideas, and affords many opportunities for profitable enquiry. The practices of those successful in the cultivation of some particular things tend to excite in others a greater interest in their favour, by which a spirit of emulation is excited, productive of still greater improvements. There are many hints to be acquired by an amateur, or gardener, desirous to profit by the ideas of others, which he may see carried out in the management of other places where the results of experience, study, reflection, and well-devised experiments are made manifest. There are some men who follow "the even tenor of their way," possessed of genius to originate improved systems of cultivation, unambitious to publish them to the world, content with the sphere of usefulness in which they are placed, but unconscious disseminators of useful improvements in the art of gardening.

For a visit to London, the season of the Great Metropolitan Flower Shows should be selected. At such exhibitions the best productions of the country are to be seen. To an amateur, or gardener, desirous of seeing well-grown specimens of plants, it is there he can behold them in a high state of cultivation, the luxuriance of the foliage greatly enhanced by the splendid profusion of bloom. It proves the power of man's increasing knowledge of the natural habits of plants, to surround them with the agents best suited to their perfect development, and to defend them from all the influences that could in the slightest degree tend to mar their progress to perfection.

A person interested in the cultivation of hothouse and greenhouse plants, and who, for the first time, sees the splendid collections, is struck with astonishment and delight by the size and splendour of his favourites. To all who are curious to see that singular but beautiful tribe of plants, the Exotic Orchids, there they can behold them in full bloom, some sporting like butterflies on expanded wings, others appearing, without much stress of imagination, like doves sitting at rest. The peculiar formation of the Pitcher Plant is the subject of admiration with all who delight in investigating the wise purposes for which each and every plant is produced, and the crowds that loiter around the tables of delicious fruits attest the lively interest that is taken in a class of substances, the most interesting, agreeable, and valuable to man.

But we will suppose the visitor just arrived from the country to spend the first day on a visit to the Crystal Palace, at Sydenham, where he will find the hours too short for a thorough investigation into all the works of Nature and of Art that are there so lavishly displayed.

On the second day, a sixpenny ride in an omnibus from the Bank, or from any part of the great thoroughfare, to Piccadilly, will ensure him a safe journey to Kensington, where he should stop for a short time to see the fine Orange-trees, and many other things worthy of notice, under the excellent management of Mr. Scobie, head-gardener at *Holland House*, the seat of Lord Holland. In the immediate neighbourhood is *Argyle Lodge* (late *Bedford Lodge*), Campden Hill, under the management of Mr. Caie, well known for his successful application of scientific principles to all his practises of gardening. Contiguous is *Thornwood Lodge*, the seat of Henry William Vincent, Esq., where the lawn on the south front displays a landscape scene, by Ramsay, of a peculiarly interesting description. The mass of trees in the middle ground gives a decisive shadow that throws the smooth, winding and undulating glade into a beautiful perspective. The *Nursery Grounds of Messrs. Lee*, the Vineyard, Hammersmith, are well worthy of a visit. About two-miles-and-a-half further down the high road is *Chiswick House*, Turnham Green, which the visitor can easily reach by a sixpenny ride in an omnibus. This seat of His Grace the Duke of Devonshire is classic ground dedicated to the Muses, and is ennobled by several magnificent Cedars of Lebanon. The gardens are kept in first-rate order, under the superintendence of Mr. Edmonds. The fine avenue of Lime-trees, and the modern system of flower-embellishment, are well worthy of being seen. Separated from these grounds only by a hedge is the *Horticultural Society's Gardens*, well-known to all visitors to the Metropolitan Shows. A ticket from a member is necessary for admission to these gardens. *Mr. Glendinning's Nursery* is close at hand, where information on the subject may be obtained, and a fine collection of rare trees and plants can be seen.

If the visitor is not too fatigued, and is disposed to make the best use of his time, we commend him to the guidance of another omnibus conductor, to set him

down; about one mile further on, at Kew Bridge, crossing which, and visiting *Kew Gardens*, he can see the large Palm House, and a most extensive and varied collection of plants, both in-doors and out, and a very interesting and instructive Museum. The hours of admission to the public are from one to eight o'clock in summer, and from two to six o'clock on Sundays. At the west end of Brentford, about one mile from Kew Bridge, is *Sion House*, the seat of His Grace the Duke of Northumberland. Although the prophecy of Sir Joseph Banks—"That ere long the Akee and the Avocado Pear of the West Indies; the flat Peach, the Mandarin Orange, and the Litchi of China; the Mango, the Mangosteen, and the Durion of the East Indies; and, possibly, other valuable tropical fruits, will be frequent at the tables of opulent persons; and some of them, perhaps, in less than half a century, be offered for sale on every market-day in Covent Garden,"—is not yet fulfilled; nevertheless, the many tropical plants that have been fruited at Sion House, and exhibited at the Metropolitan Shows, testify to the possibility of fruiting such things in this country.

We shall resume, next week, our list of the gardening sights near London.

K.

STOPPING SUMMER GROWTHS.

You would hardly suppose that there is a man, woman, or child, in the kingdom, or in all the world, who could not learn the art of "stopping" the shoots of plants and trees at one lesson—pinch out the top of the shoot with the forefinger and thumb, and the thing is done in a moment. So it is, sure enough; but there is no *art* in that way of doing it at all; and there may be a great deal of mischief in it, and often is, to the bargain.

I once lived with a gentleman who never went about in the country without his walking-stick, which had a "spud" on the bottom end, with which he was constantly routing out Docks, Thistles, and other noxious weeds in and round the fields and plantations, wherever he went; also the Plantains and Daisies on the lawn, and such weeds as he could see in the beds or borders; and, to the last, I could never convince him that he often did more harm than good by so doing. It was his way, and he could no more help it than I could. A Groundsel, or a Shepherd's Purse, or a Dandelion, and many more such common weeds, take several days after the flowers open before they seed, or do any more harm than is done already; meantime, some one passes by that way who pulls out the weed, and carries it out of the way at once, or sends some one else to weed that bed or border; but the "governor" gets there before him, with the everlasting spud and the ruling passion, twists down the Groundsel with one turn of the spud, cuts the neck of the Dandelion in two, or makes a hole in the grass, big enough to play marbles into, trying to root out a Plantain or a Daisy—all of which is, as I said before, doing more harm than good. The Groundsel has sap enough in it to ripen its seeds while it lies unperceived till the mischief is done, till a fresh crop of seedlings spring up. So the bottom half of the broken neck of the Dandelion sends up four heads for the lost one, and there are thus four chances that the mischief will run much farther than it would were it not for the spud. In short, I would as

soon let a Welsh goat into the shrubbery, as let an amateur spudder into any part of my own garden.

There are other people, and most of them are nice, amiable people, who never do any real harm in a garden, save one kind of mischief, and that they do unknowingly to themselves. It is *their* way of "stopping." If *they* stop a thing, they think it is stopped for good, and there is an end of it; but the end is no better than from spudding; they pull up the weed, and, may be, shake the soil from the roots; but they throw it down in the same place, and if it is of the seedling class, a crop of seeds is sown there before the gardener sees that a dead or dying weed was there at all; whereas, if this weed had been left standing, he would have seen it the next time he passed that way; and he would "stop" it, according to the rules of his own art; he would have it up, root and branch, and carried off at once; and all those who stop weeds on any other plan do, or may do, more harm than good.

There are other masters, and some mistresses too, who read a great deal about gardening without ever *studying* one single word on the subject. You would take them to be very clever on gardening from their conversation, but if you saw their "stopping," you would just think as I do, and I think a great deal at times about such things. The meaning of a sentence of much import may be lost by putting the comma, the smallest "stop," in the wrong place; and it is the same if you apply the smallest stopping to plants and trees; stopping a shoot at the wrong time, or in the wrong place, may spoil the shape of a specimen, the flowering of the best Geranium, the fruiting or the future crop of a Vine, or a Peach, or any one plant you may think of; and yet these superficial people think there is no art in stopping, beyond the mere process of doing the act, from the weeding of the walks, up to the regulation of the branches of the Mangosteen itself. You have only to put *their* stopper on, and all is right; and must be right, for they have read of it and knew it years ago!

I made a fresh start this season with Chrysanthemums, and more particularly with the Pompones, some weeks back. I told about how I would treat them, and as far as it was possible for me to do them. I did them that way, and now I am satisfied with all I did to them; but what makes me allude to them so pointedly is this,—I had a very knowing visitor to look at them lately; and in going round, we found many of the plants wanted "stopping," and there could not be a better chance for me to find out, indirectly, what was in the man; that is, how far he understood that on which he could talk so readily, or so readingly rather, if I may use the word. I did find it out; and when I tell you of it, you will think as I did, that his notion was like grafting a Pear on the wrong end of the stock; but as there are many in the world like him, the best plan will be to explain the difference, rather than find fault with the one, or praise the other.

GLAZED BOX FOR CUTTINGS.

First of all, let me say how I have struck the *Pompones* and other *Chrysanthemums* from cuttings this season. I had a packing-box by me which is above three feet long, about a foot deep, and not much wider than ten inches; I got squares of glass to fit exactly on to the top of this box, and I put a thin layer of sandy soil on the bottom of it to stand the cutting plants on, and placed it endways against the front upright glass of my back *sanctum*, and of all the hotbeds, or cold pits, you ever heard of, this may be called the simplest, and one of the best, for summer use. I only lost one cutting out of several scores, and now it is full of Rose cuttings, or will soon be; and if you happen to have any loose panes of glass by you, any old packing case may be

altered, or made up afresh, to suit the size of the panes and of the cutting pots. The best place for this kind of box to stand is the angle in front at the east or west end of a greenhouse, and if that end be of glass, all the better; put the box endways against the front glass, and the back of it will be against glass also; but all this light does no harm, as the box is square on the top, and can only let in perpendicular light. From the end of May to the end of August there is no end to the uses to which a simple contrivance of this kind may be put; but for great nicety, such as for delicate seedlings, Heath cuttings, and such like, a layer of pure white sand must be used for the bottom, for without the sand, or soil, to stand the pots on, the arrangement would be a dead letter. It is by watering the same, or not watering it, at times, that you regulate the climate of the box. Perhaps it is the best invention that ever was thought of for striking such cuttings as cannot stand bottom-heat, or that must have a month or two to form the knobs at the bottom, before they are brought to a hot bottom bed. All the sides being of wood, and the light only perpendicular, seem to be the principle, whatever is in it. Mr. Walton's case is the bottom-heat edition of it. The Waltonian case is heated by a lamp acting inside a "false" bottom, different from all other applications of hot-water. The alteration I wished, consists of a coil of the smallest gas pipe to pass through the water backwards and forwards—like putting hot-water pipes through a tank; then, with a small jet of gas, or by a common lamp, one of the nicest hotbeds, or propagating cases, that ever was made, or thought of, could be had; the end of the pipe should pass out near the top of the box, and into the open air, to get rid of the smell of gas or oil. A turn in the domestic wheel has yet prevented this application of heating the Waltonian case being put in practice; and until it is in force and proved, it would be rash to give a plan of it; but anybody who understands tin-work could do the tin box, and put in the piping without a drawing. I am rather satisfied, than not, that this new case has not been engraved yet, as, in all probability, to have it square on the top, instead of sloping like a hotbed, will be an improvement, or, at all events, a convenience; as little or no shading will be necessary when the light strikes perpendicularly; but my own box will teach me all that before the season is out.

CHRYSANTHEMUM CUTTINGS.

As soon as my cuttings were rooted in 48-sized pots I topped them, but did not pot them off, for potting off is a bad plan on this system. I then planted out the balls entire on a warm border, and as soon as the fresh shoots from the stopped cuttings were one inch long, I took up the balls and separated the little colony, planting each plant singly. By so doing, I did not check the growth so much at first, which was a saving of time; and when I did give the check, it was necessary; and I hold that a gentle check should be given every ten days or a fortnight to Chrysanthemums which are grown out in the borders, with a view to having them put into pots for blooming. After the middle of July they grow too fast by one-half that is good for them; but that is no harm, if they are not intended for pots. The old plants of last year were kept in the pots all the winter, and till after the middle of May, when the shoots were from four to six inches high; the shoots were then thinned and cut back to different lengths, according to their size, and in ten days they were in leaf again from the "fresh start." Then the whole of the soil was shaken from the roots, the balls, or plants, were divided into four, five, or six pieces, and the old roots were cut back more than one-half their length, and the separate pieces were planted in rows, like so many cabbage plants, only that they were planted but a few inches asunder.

When the well-read man—my fast friend—called, these plants, at least many of them, were forward sufficiently to be "stopped" the second time, or say the first time, after being divided and planted out separately. One plant, however, will suffice to show the two opposite modes of stopping Chrysanthemums and a great number of other plants. This plant was *Daphne*, one of the best dark Pompones; it had two shoots much stronger than the rest, which, if they were not stopped at all, would take the lead, and be the only two shoots that would flower, the rest being half-starved. There were five of them, making seven shoots in all, which might be considered a fair lot for making a bush plant without stopping; but we have two reasons for stopping. The one is to get more shoots when that is necessary; and the other, to keep the plants more dwarf; to check, in fact, under another guise. Then, if my plant was high enough without stopping to induce more shoots, will it not be too large, or too bushy, if I get two or three shoots from every stop? To be sure it would; but I can thin the shoots as much as I choose, and the check, by stopping, will give me a dwarfer plant; besides having so many shoots to choose from, I can have my bushy plant more regular.

These being the facts and the reasons for my guidance, and which were as plain to my friend, as I hope they are made to you, the cause of the error in stopping will be the more clearly made out against one of us. Now, with two strong shoots and five weak shoots on a young plant, which shoots would you stop first, the strong or the weak? Or would you stop the seven at the same time? My friend was for stopping the two strongest shoots at first, and, as soon as they broke into a fresh growth, he would stop the weak ones, and not till then; and I had to go into a long course of practical argument before I could make him understand how wrong his ideas were; but he could see, at last, that his plan went to make a bad case worse than it was at first. It was bad enough to have the shoots so different in strength; but worse to operate upon them so as to make the difference still greater, as nine-tenths of general readers do, in such cases, without taking into consideration what they are about. But we gardeners are a good deal to blame for this; we do not explain the difference between stopping a strong shoot on a fruit-tree, and one on a bush, or plant, which we desired to be more bushy from the bottom.

It is not to make a fruit-tree more bushy that we stop the robbers, as we call the strongest shoots, but to stop the current of the sap, and so force it into the weaker branches, which are seldom stopped at all. When it is necessary to stop all the shoots on a plant, the weakest ought to be first stopped, in order to get them stronger, which seems a puzzle to those who do not know the practical part of our calling; but at this season you can prove it in a month on a common Laurel. Take a branch with two young shoots—the one is very strong, and the other a weak one; stop the weak one, and allow it to push two or three eyes into leaf; then stop the strong one, and before it can break again, the shoots on the weak one are a good way on, and able to draw on the sap more than those which are merely breaking bud on the stronger shoot. Then, suppose we leave only two shoots to come from the weaker parent, and four or five shoots on the stronger, the balance of strength is restored in a month, and you have six shoots of equal, or nearly equal, strength; but if you stop the strongest first, and allow it to break into three or four fresh ones before you stop the weak shoot, these three or four having the start of whatever the weakest shoot will give out, they will keep a-head to the end of the season, if they do not starve the weaker and later shoots altogether. If we could stop the growth of the strong shoot till such time as the weak shoot was

nearly as strong as the first, and then let them both go on equal terms, all would go on well: but we cannot stop growth one moment in the growing season—the right season for stopping; for as soon as we “top” a shoot, if only by breaking a bud, the next buds below will yield to the force of the rising fluid or sap immediately, and many of the summer practices are founded on this knowledge; as, for instance, a Rose-bud of last autumn is now a one-shoot plant, and very apt to be blown over by the wind or other force; but stop it at the top, and out it branches in ten days, and will soon make a beautiful round head. Those who neglect to take advantage of this may get one shoot from a bud up to three feet in length; but what is the good of that? they must be cut down to four or five eyes next winter; and it will be this time next year before a head, such as our present head, can be had. Almost all nurserymen spoil, or lay down the foundation for the ruin of, Peach and Apricot trees, by leaving the original bud to form one gross shoot the first year, instead of stopping it when it is nine or ten inches long, and take five shoots from the next start for wall-trees, and four shoots only, and of equal strength, for pots and Orchard-house work.

D. BEATON.

CRYSTAL PALACE STREET.—We shortly alluded to this a week or two since, and the plan, since then, has been made public. We heard it wittily observed upon this plan, that “Sir Joseph had now a glass too much;” but it is by no means clear to us that “when Peace returns once more,” such a Crystal Boulevard will not be constructed.

We copy the following particulars from *The Times*:—

“Much interest has been excited by the publication of the plan understood to have been in preparation for some time by Sir Joseph Paxton for effecting a new and thorough communication between the city and the west end, and its ultimate extension in the nature of a boulevard round London. The proposal embraces a carriage arcade of the same breadth as the transept in the old Crystal Palace, which was wider than that of the present one, starting from the Mansion-house towards Southwark-bridge, crossing the river, running to the South-Western Railway station, and thence across the river near Hungerford-bridge to the Regent-circus, the communication by this route being nearly the same in point of distance as that by the Strand. At the same time a line of similar character would branch from a point near the South-Western Railway to the Houses of Parliament and Victoria-street by a bridge at Lambeth, and, as at the back of the houses on each side atmospheric lines of railway are to be constructed, the transit between Belgravia and the Bank would thus be reduced to about eight minutes, and between the Bank and Charing-cross, or the Regent's-circus, to about five or six minutes. This railway would be at an elevation to enable it to pass across the various streets which it would intersect without interfering with any of the existing roads, and the system would involve a constant succession of express trains as well as of stopping trains at every half-mile or less, so arranged as to be perfectly noiseless. The carriage-way of the arcade, it is contemplated, should be closed against waggons between 9 in the morning and 9 at night, to insure the facilities for quick passenger traffic as well as for increasing the attraction of the costly shops on each side, and among the prominent recommendations of property on the line would be the protection afforded to all kinds of goods by its cleanliness, equable temperature, brightness of light, and immunity from weather as a promenade and drive in summer and winter. The estimated cost of this improvement, which Sir Joseph Paxton considers would be the largest thoroughfare in the world, and such as to make London the most magnificent and convenient city in existence, is £11,300,000, and the calculated returns from rents and railway revenue are £933,000, or between 8 and 9 per cent. To insure its

completion, however, in the best manner for the interests of the nation, it is contended that the co-operation of Government should be obtained, and that this should consist in a guarantee of 4 per cent. interest for 60 years, on condition that a half of one per cent. should be set aside annually to redeem the capital within that period, and that all receipts above 4 per cent. should be equally divided between the State and the company. Under this it would appear that, if the property were to yield the anticipated return of 8 per cent., the transaction would result in the nation receiving an annual payment of more than £200,000 for 60 years, and at the end of that time being put in possession of the entire property, without ever having incurred an expenditure of a shilling, while the public would gain three free bridges and the removal of delays and obstacles which have been estimated to cause an annual money loss of upwards of a million sterling to the trade of the kingdom. The ultimate extension of the undertaking as a boulevard encircling London, and connecting all the railway stations, would increase the total cost to £34,000,000, but it is obvious that the grand point of bringing the city and the west end into rapid communication should be the first to command attention, and it is an advantageous feature of the plan, that this object, which appears free from uncertainty, can be accomplished by itself, leaving the remainder to be carried out as a necessary consequence of its success.”

A GOSSIP ABOUT PITS.

A GREAT many enquiries having lately been made on this subject, I will endeavour to meet a number of them, as the sooner all building operations are decided upon, the better order will the structures be in for giving good service in winter. The severity of the last winter has made many anxious to improve their various receptacles for plants, and no time should be lost in effecting them.

TURF PITS.

“I have a small turf pit, in which I managed to keep many bedding plants last season, while I lost many, or the most of those wintered in a brick pit, which I had built at great cost. Shall I be wrong in extending my turf pits? Have you any suggestion to make? The pit is eighteen inches deep in front, and three feet behind, half below and half above the ground level, posts having previously been knocked in every four feet, on which a stout rail was fixed top and bottom, to receive the sashes. The great enemy is damp.” Where success is gained, that in general proves that the means employed cannot be far wrong. The construction of turf pits has frequently been recommended in this work to those where economy and utility were paramount objects. A pit made of turves, or even of earth, fifteen inches in width, will be a better security from frost than a common brick wall nine inches thick. The turf is better than mere earth, because, until it becomes quite decomposed by age, it will retain more confined air, which will act as a non-conductor. This is what is to be guarded against in a cold pit with brick walls in very severe weather. The conducting powers of the bricks will, ere long, cause outside and inside temperature to agree, if nothing is done to protect the wall. I know of several instances of ruinous results this last winter, because, though the glass was sufficiently protected to keep out almost any possible amount of frost, the enemy entered by the side walls, which were left exposed. Here, again, the turf and earth walls have an advantage, independently of their inferior conducting of heat powers. It will be easiest to build them on the outside in a slanting position. For instance, if the wall is to be from two to two-and-a-half feet above the surface, I would make it eighteen inches wide at the base, and only nine inches at the top—the inside being upright,

or straight. On this inclined plane a little litter may be laid in winter easily, and be retained there without trouble, when it would be always falling away from the sides of an upright brick wall. Very little of this litter will keep a sharp frost from getting into the ground so as to freeze the wall. The drier that wall is, the better it will answer every way; and to keep it dry, nothing will be more effectual than covering the outside all over with coal tar from the gas-works, which may be procured at from one penny to twopence per gallon. If this coating of tar is well smothered with hard road drift, or sharp, sandy gravel, you will have an outside as hard and more impenetrable to water than a brick wall. The upright face inside might be covered in a similar way; but if so, no plants must be put in for a number of months, when the fumes of the tar are all gone. If the sashes are put in early in the autumn, to prevent the pit getting wet, there would be no necessity for tarring the inside of the pit; and if the inside is done a month or two before being used, there is no danger of any fumes affecting any plants injuriously. Though the smell is not extra pleasant about a garden, it soon goes off, and while it remains has a tendency to set much vermin, as mice and rats, a flitting. The damp complained of would be so far prevented, if, instead of being sunk, the most of the pit stood above the level of the ground. If the ground all round, for a couple of yards or so, were made to slope from it, and that too had a thin coating of tar covered with a sufficiency of fine gravel, the rains would thus at once be removed for a considerable distance from the pit. If the bottom of the pit was concreted, much moisture would not rise from below; and if great care was exercised, in watering in winter, not to spill a drop, nor yet give a drop too much, there would be little danger of damping, and a useful and very economical pit may thus easily be formed. Where such nicety is not required, and it is desirable to make the pit as little conspicuous as possible, a wall of earth a little sloping would answer well, and that could be covered with turf to resemble the lawn in its neighbourhood. Such are more calculated for spring, summer, and autumn, than for winter use, and are just the thing for placing plants in that are removed from other houses, or where sufficient protection can be given to the pots whilst the tops of the plants are exposed to sun and air. The reflection of light, and radiation of heat from the back wall, will also accelerate the ripening of the wood of all plants so situated in summer.

WOODEN PITS.

"I am anxious to winter a number of hardy greenhouse and bedding plants. Brick and stone are difficult to be got in my locality. Wood I can get very reasonable. Would not boards nailed to posts answer the purpose?" Undoubtedly. Strong boards, from one-and-a-half to two inches thick, closely joined together, would keep out as much frost as a common brick wall, as wood conducts heat so slowly. The wood ought, however, to be well-seasoned, or you will soon have cracks and openings at the joints. The seasoning of the wood, by drying and keeping, will increase its value; and, therefore, make the pit more expensive. To escape this contingency, and be free from the openings and swellings of green wood, and yet to be able to use it, thin pieces of board, three inches wide, may be tacked on each side of the joints, and then the shrinking and swelling alternately will be attended with no inconvenience. Such a pit, made with green wood, will last longer from being rough planed; but if ever painted at all, it should only be when thoroughly dried and seasoned by exposure. A great deal of painting is worse than labour lost, being more than money thrown away; because accelerating the very decay it is intended to prevent. Perhaps a better pit still might be made of

one-inch boards, placed on each side of the post, leaving a vacancy of some four or five inches between them, and filling the vacancy with dry saw-dust. It would require an extraordinary frost to penetrate this; and with common care, such a pit would last a long time, and look very neat. If intended for low plants, it would not, as respects utility alone, be more valuable than a turf or earth-pit; but it would be more easily got about. If sunk partly in the ground it would be more warm, but more subject to dampings than if it stood upon the surface.

"I have difficulty in getting bricks; wood is expensive, chiefly owing to sawing and carpentering. I can shortly get plenty of Larch poles, peeled, some two or three inches in diameter. Would not these, cut into requisite lengths, do for shallow pits; the one end being driven into the ground, and the upper ends left in a level line, so as to suit for spring protecting, and keeping some hardier things in winter?" I have seen ranges of such pits used chiefly for Lettuces, Cauliflower, &c., in winter, and for bedding plants in spring, when the houses became too crowded, and they answered well, covered merely with wooden shutters, straw hurdles, mats, &c. If such pits were to be honoured with glass, so as to protect and grow plants in winter, the rows of stakes would require to be double, and saw-dust placed between. A very lasting pit might thus be formed in out-of-the-way places, where young trees were the chief articles in extra abundance. If the lower part of these stakes, thus placed close together, were slightly charred before placing them in the ground, and when the upper part was well dried, it was painted with Stockholm tar, I have no doubt such pits would last a long time, and look very neat.

STRAW-WALLED PITS.

"I have been struck with the apparent simplicity and economy of straw-walled pits for bedding plants, &c. Being a farmer, such pits would cost me nothing beyond the posts, the rail, and hazel rods; and even these could be mostly got on the farm. Would it be possible to keep Geraniums, Calceolarias, &c., in such pits, covered with glass in winter? and what thickness should the walls of straw be?" There can be little question as to the possibility of keeping plants; but I cannot, from observation nor experience, speak definitively of the thickness of such a straw-wall; but should consider that a wall of straw firmly pressed together, and standing upright of from six to eight inches in width, and kept as dry as possible, from the top being covered with a frame a little wider than the straw, would keep out more frost than a nine or a fourteen-inch wall. All these pits would be more effectual if there were contrivances, by openings, for giving air quite level with the bottoms of the pits.

R. FISH.

(To be continued.)

AEROLITE IN A TREE'S TRUNK.—An Aërolite has been found in the heart of a tree recently felled at Battersea, and it is now deposited in the Museum of Practical Geology. At the next Meeting of the Royal Society some observations upon this meteoric stone will be read by Sir Roderick Murchison.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—The twenty-fifth meeting of this Society will be held at Glasgow on the 12th of September. The Duke of Argyle is to preside.

ADVICE TO YOUNG GARDENERS.

(Continued from page 147.)

IN my last paper containing advice to my young friends, I mentioned that it was desirable for a young man that had obtained a head-gardener's situation to lay down a plan (to be strictly acted upon, as far as possible) for the future management of his health, in the first place, as being the most important; and in the second place, the taking care of the surplus of his salary to provide for comfort and subsistence in his old age. The first part of this plan, namely, care of his health, I have, I think, sufficiently dwelt upon. Every one prizes health, and he is not wise that wastes or endangers it by neglect, excess, or carelessness. So, in a degree, is the waste of money, or improper spending it.

Now, supposing our young friend has sense and resolution to spare in youth that he may have to spend in age, he should lay down a plan of strict economy, and, in proportion to his wages, lay by every year a certain fixed sum. Though some things in every man's life are accidental, that is, he may lose his place; he may be sick, and the doctor's bill reduce his savings; yet these are exceptions to the rule, or plan, laid down. The moment these interruptions cease the rule should be resumed. How can a man expect to obtain an independence, if he allows a temporary accident to divert him from the line of action he had so wisely laid down as a rule? I am sorry to say that the greater part of our working men begin their manhood as if their strength and the means of livelihood would never be exhausted. They have no plan, nor fixed object in view. They would like to acquire riches and honours, but have no plan nor strength of mind to bring their wishes into fruition, but go on squandering their time and means, always resolving to do better sometime, and be more careful for the future; but alas! that sometime never comes. The consequence is, old age overtakes them, and no provision has been made for it. They must then depend upon the cold charity of others, or even have to spend their last days in the workhouse. All this might, in nine cases out of ten, have been avoided by adopting a strict plan of economy,—an annual saving out of the wages earned in the prime of life. Many, even many gardeners, suffer in old age poverty brought on by want of frugality, or even by positive extravagance in food, drink, and clothing. Many arrive at the same sad state by marrying too young.

Too many only save money that they may be able to scantily furnish a house and get married. They are not very particular as to the quantity or quality of furniture. This is obtained by a very few years' savings, and then they get married, and what is the consequence? a large family, a life of hard labour, scanty food, mean clothing, often bad temper on both sides, and disease brought on by imprudence and want. Then, again, as is well known, a gardener with a large family has always a difficulty in obtaining a situation. Almost the first question a nurseryman asks, when a gardener applies to him for a situation, is, "Have you any children? and if you have, how many?" If the answer is four, five, or six, the nurseryman is almost sure to say, "I can do nothing for you." Gentlemen object to gardeners with large families. Let me not be mistaken; I do not consider this objection right. A man with a family may be one of the best of gardeners, and has the best reason in the world to be a good and faithful servant, namely, to support his family. Many reasons might be given why a man with children ought not to be rejected on that account; but all the reasons in the world will not alter the fact, that men so situated are too often rejected on applying for a place.

The only plan to escape such a state of misery

(I can call it nothing else, when a man cannot obtain the means of bringing up his large family respectably) is, not to marry young. At this moment, I know several young gardeners that are married, and having children, before they have obtained a head place; married foolishly, before they have even obtained a knowledge of their business. Let me beg, nay, earnestly entreat all young gardeners that read these lines, seriously to consider the consequences of such foolish, I had almost said sinful, marriages. I have hinted at some of those consequences above, and many more might be given, such, for instance, as the effect of having a large family to bring up in rags and ignorance; for how can a man who only receives the wages of an inferior place clothe the bodies and minds of some seven or eight children, even if he obtains a place at all, or keeps one all his life. I trust, then, my young friends will be cautious on this point, and not marry till, at least, they are from twenty-eight to thirty years of age, and then to marry a person at least twenty-five years old.

All this warning against early marrying, some may say, has nothing to do with saving money; but if not with saving, it has to do with spending that which has been saved, and preventing any more being added to the stock, even if my young couple may not touch the few first years' savings. Let not my young friends think that I am an opponent of marriage; if they do so think, they will judge me wrongly. I have been married now more than thirty years, and have sons and daughters, many, and I am thankful to say they are all doing well, filling respectable situations in life. I can testify that matrimony is a desirable state, but then it should be entered into with prudence, and at a mature age, when experience and stability have stamped the man and the woman as being fit and suitable for that responsible state of life.

Finally, in order that my young friends may perceive the benefit of a determined, persevering saving, I subjoin a table of different sums saved annually, commencing at the age of twenty-seven, and continued up to fifty years of age, placing the sums so saved in a Savings Bank, or in government securities. The interest allowed in those places does not exceed, or very triflingly, more than three per cent.; but then it is safe, and the interest sure. The interest should be added half-yearly to the principal. When our friend is fifty years old, he may realise his money, and purchase an annuity for life in some safe Insurance Office. If he has a wife, he may secure the annuity to her for her life, should she survive him. Thus:—if he save

		£	s.	d.
£10	a year, it will amount in 23 years, at 3 per cent. to	274	12	3
	which will purchase an annuity of £15 a year			
£20	do. annuity do. £43 7s. 9d.	549	5	3
£40	do. annuity do. £86 16s 3d.	1098	15	9
£60	do. annuity do. £130 3s. 3d.	1647	15	9
£80	do. annuity do. £173 15s. 3d.	2197	1	0

I need not carry this table any higher, as I fear there are very few places indeed that will enable a man to live and appear respectable, and at the same time save more than £80 a year.

I have only a few general remarks to add to my papers addressed to Young Gardeners, and these I will take an early opportunity to write. T. APPLEBY.

(To be continued.)

ALGERIA BECOME A GRANARY FOR FRANCE.—Algeria is able to feed an indigenous population whose alimentation is almost entirely wheat. She furnishes bread to the European population and to the army. Since the war in the East she has exported to our troops enormous quantities of grain and flour. Its surplus, meantime, has doubled each year since 1853. In 1853, she sent us two millions of hectolitres; in 1854, she gave us four millions; this year, according to all appearances, she will supply us with eight millions of hectolitres. The Arabs, in fact, encouraged by the high price of produce, have sowed on a scale more and more vast—an excellent proceeding in more than one point of view, and notably to the interest of colonial security. A tribe awaiting the produce of its seed thinks little about insurrection, and the natives are thus drawn towards us by the feeling that with them the thirst of gain most efficaciously overcomes religious scruples and the spirit of independence. Let these figures and facts be well considered, and it will soon be seen that Algeria, anciently the granary of abundance to the Romans, will re-assure this metropolis against all chance of scarcity. We may congratulate ourselves on being the peaceful possessors of those rich countries, whose antique symbol, let it not be forgotten, was a stalk of corn.—*Constitutionnel*.

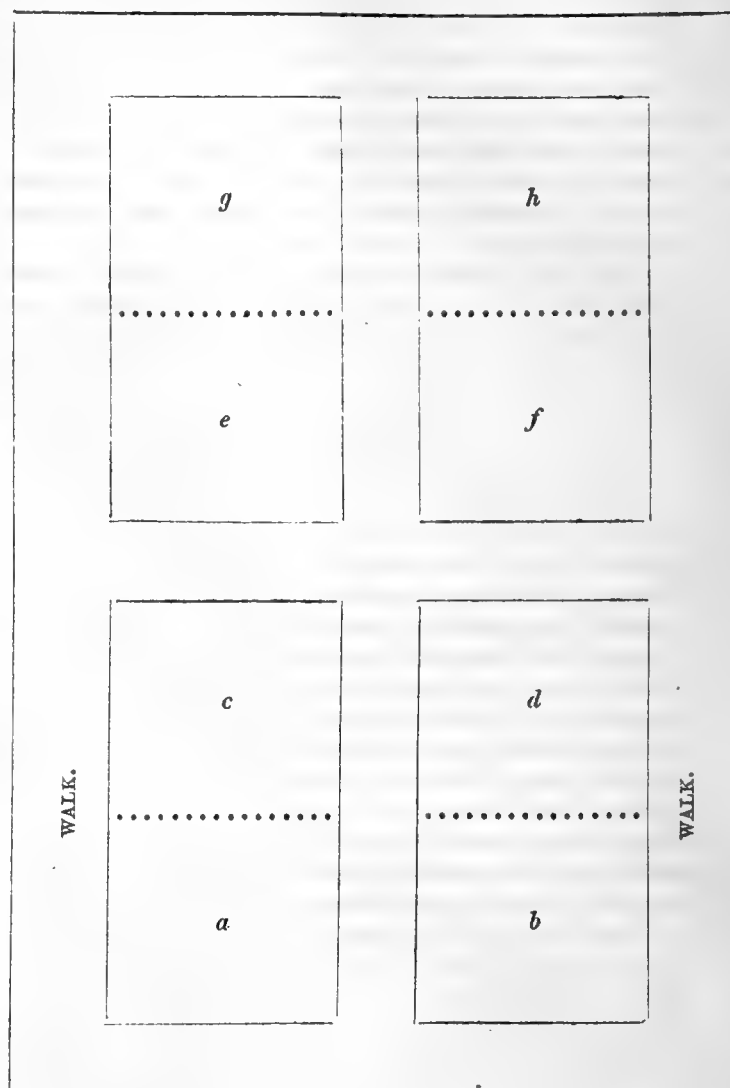
NEW POTATOES.—There was raised, on Saturday, June 2, from the north-west corner of Mr. Robert Walker's garden, Helensburg, N. B., a quantity of new Potatoes of the ash-leaved kidney description. They measured generally about three inches in length, were of proportionable thickness, and altogether gave evidence that his general crop will be as remarkable for excellence as earliness.—*Scottish Guardian*.

GARDENING FOR THE MANY.—JULY.

KITCHEN GARDEN.

GENERAL REMARKS.—Notwithstanding the fine showers we had in May, and in the early part of June, and up to the period at which I write (the 20th), there has been an unusual absence of warm sunshine, so that we must still admit the season to be “a late one,” we have, however, sufficient promise that it will eventually be a fruitful one; that the kitchen gardener, as well as others, may hope to receive as large an amount of produce from his various quarters as he usually gets in the best seasons. There are some failing crops, and some that do not promise well. Among the failing ones, *Carrots* are thin in many places, while *Asparagus* has not been so good this year as at some former periods. *Cauliflowers*, in general, are good, and this season some very good heads came into use before the latest *Brocoli* was over, which is the first season that I have seen it do so in the same garden. *Peas* give promise to be good; and, so far, the *Potatoes* seem free from blight; as those in frames have never shown any symptoms of it, that I am aware of. Some little difficulty has been experienced in getting small, delicate seeds to vegetate in the open ground this cold season, as, for instance, *Basil*, which, being a delicate plant, ought never to be sown in the open ground before the middle of May. Hardy seeds have germinated well, and, in general, they look healthy. The accounts of hardy fruits are contradictory, yet, on the whole, good; *Red Currants* and *Gooseberries* being plentiful; and *Apples*, *Plums*, and *Cherries* tolerably good, especially the latter. *Apples* are blighted in certain places; but not to any great extent. *Pears* are

various—some kinds good, others middling, and some bad. *Black Currants* are not so plentiful as they promised at one time, but enough remains for a crop; while *Strawberries* and *Raspberries* are both good, but late; scarcely any of either showing any symptoms of colouring yet, yet I write at Midsummer. *Wall-fruit* plentiful, except *Figs*, which are not so abundant as was expected a month ago. Other minor crops are the same as in the average of seasons.



a.—This being all *Strawberries* and *Raspberries*, little is wanted here except taking care to remove the runners of the former, and some of the suckers of the latter, if they are not likely to be wanted; but if *Strawberry* plants are wanted for any purpose, allow a few of the strongest runners to ramble over the ground adjoining the outside row, and peg them down into pots at once, otherwise into the ground, after having first stirred it to receive them. This must be done by the first of the month, if not before. Gathering the fruit carefully, and not injuring the principal plants by any rough treatment, must be insisted on by all who have access to the *Strawberry* beds. The junior members of a family sometimes do much mischief that way, by trampling on and breaking the crowns of the plants. Where the garden is in an exposed place, protection from birds, by netting, must be adopted, together with such contrivances, in the way of scare-crows, &c., as may seem advisable.

b.—As the *Potatoes* are dug up, the vacant ground may be dug over, and *Turnips* sown for winter use. The *Early Stone* is as good as any; but there is the *Orange Jelly*, and many others. It is better frequently to sow a little, rather than wait for the whole being vacant. Reserve a few *Potatoes* for seed, unless you have a chance to obtain them else-

where. *Cauliflower* being now about all planted, a portion of the ground may be allotted to *Early* or *Autumn Brocoli*, of the *Purple* and *White Cape* kinds; the taste of the cultivator being the guide, coupled with his wishes for certain productions, which he cannot get so well elsewhere. Give *water* to newly-planted things if the weather be dry.

c.—Now is the time to apply manure to *Asparagus* in a liquid state, which is far more beneficial than when quantities of dung are heaped on in winter. A little salt now and then is also useful. The same may be said of *Sea-kale*. *Rhubarb* will require but little care, save cutting away all the flower-stems but one, and that reduce very much; and if seed be not wanted, cut that away by the middle of the month; they will not be likely to send any more up afterwards. Keep all clear from weeds, and use the hoe freely where it can be employed.

d.—Use the hoe amongst the *Onions* no longer than you can do so without injury to the plants by breaking their leaves; thinning is expected to have been completed before. If a row of *Celery* was planted here last month, as proposed, it will require earthing up in time, *i.e.*, if the weather be dry. Remove all *Lettuce* stalks, &c., as cut, and give the whole a neat appearance by running the rake over any open spaces betimes. The same may be done in the other plots.

e.—Stick *Peas* as they want it, and be sure to remove those past use immediately they are so, and be careful in gathering the crop not to injure the *Brocoli*, and other things planted there. Plant out the *Brocoli* in such a way that they will occupy the whole ground when the *Peas* are over. I generally sow my *Peas* in rows six feet apart, and plant three rows of *Brocoli* between them; one in the centre, and one a foot from the *Peas*; and though the *Brocoli* makes but poor progress until the *Peas* are removed, yet they often make up for it afterwards. In this planting only the late kinds ought to be put in, as the *Wilcove*, *Portsmouth*, or *Danish*, or any resembling these. *Winter Greens* may also be planted under the same circumstances; but a row or two of *Brussels Sprouts* ought to be put in elsewhere, so as to come into use early in autumn.

f.—Little will be wanted here, save keeping the crop of *Kidney Beans* clear of weeds, and see that high winds do not damage the crops; the dwarf ones being nearly as liable to injury that way as the runner kinds. Do not allow any careless person to gather the crop, for if the plants should be wet, the gatherer may very likely turn the plant over to get at its produce the easier, thereby breaking it off at the neck. These remarks are only necessary to those whose assistants may not have had much experience in rural affairs.

g.—*Carrots*, as I have noted above, are a failing crop in many places, and should they be so here, it is now too late to repair the evil; but any gaps in the beds may be usefully employed in growing *Lettuce*, or a few *White Turnips* may be sown for autumn use; but do not plant or sow anything likely to occupy the ground in the winter, as ulterior arrangements may be interfered with thereby. Nip off the tops of *Broad Beans* that are getting tall, and earth up, or stir between the different rows of everything.

h.—This being mostly for *Celery*, now is the time to plant the general crop, which, to be good and fine, ought to be allowed plenty of room. Single trenches, shallow, and by no means trenching on the inferior soil, suit it best, but a broad one, similar to that advised in another place, may be made when a large quantity is wanted. This space being also the plot for *Endive*, and other odds and ends, due

attention must be paid to each. *Endive* will want planting out by the end of the month, but more generally so in August.

KITCHEN-GARDEN BORDERS.—Sow more *Endive* and *Lettuce*; the latter in a cool, damp place, if the season and situation be both dry. Sow also a few *Turnip-rooted Radishes* in a like spot. Plant out, as described above, the various *Brocolis*, *Brussels Sprouts*, *Savoy*s, &c., and the main crop of *Celery*; put in cuttings of *Sage*, *Hyssop*, and *Horehound*; and transplant into rows *Thyme* or *Winter Savory* that was sown thickly in beds. *Sweet Marjoram* is expected to have been planted out last month. Take up *Shallots* and *Garlic* when ripe, which will not be before the end of the month. Sow a few *Onions*, to draw young, if they are wanted in that state. Sow also *Small Salading* every week as wanted. Remove all cut *Lettuce* and other decayed crops, and do not allow the seed-beds of *Brocoli* to remain any longer than to make sure that the crop is safe, but remove and dig after dunging such spots, and you will easily perceive what crop is fitting it, but by all means avoid the same one again.

FRAMES.—If the *Cucumbers* were gradually inured to the open air, so that by the 20th of last month the frame could be shifted upon another hotbed made ready for it, and a few *Melon* plants to be had of some neighbour, there is yet time for their producing some good fruit. A rather stiff loam suits them best, with little or no manure, keeping a sharp look out for disease of all kinds, for if it attacks the *Melons* in an early stage, all hopes of their success is at an end. Shelter the *Cucumbers* on cold nights with anything that may be handy, as mats and oil cloth, propping it up from pressing on the leaves. Trust nothing inside the *Melon* frames but what you are certain is clean and free from insect.

ROCKERY.

This, partaking of the character of the flower-garden, may be treated much the same, only there is no training, or "tying-up," but certain rank-growing plants must not be allowed to overgrow a weaker one, and all decayed ones must be cut away. Propagate anything that may seem to deserve it. Most herbaceous plants increase freely by cuttings, but some do so more easily by separating at the root, as *Phloxes*, *Campanulas*, *Gentianas*, &c., while all that can be raised by seed flourish much better where that way is adopted.

FLOWER-GARDEN.

This being now gay with the *Roses*, *Valerian*, *Campanula*, *Phlox*, *Silene*, &c., notes must be taken of those most deserving of further propagation, and others less worthy may be dismissed. In a usual way, the anxiety to have a good collection runs into extremes, and the small plots, or beds, get crammed full to suffocation. This is bad; better have a select few plants, standing clear of each other, and each producing good, healthy, strong flowers, than a confused mass of half-grown ones; and as this is the season to see the effects of this, the amateur will learn more by experience than by whole pages of letter-press, more especially if he have the chance to see the mode by which a good mixed flower-bed is kept up. Massing is another thing; then plants may be placed as close together as the means of the party will allow, but this must not be with a mixed border or bed.

Tie up *Phloxes*, *Dahlias*, *Hollyhocks*, and all tall-growing plants, and cut, or remove, all decayed flowers, as they are no longer ornamental. Plant out any late annual that may be wanted to fill any gaps, and especially plant out some *Brompton* and *Giant Stocks* by the end of the month. Cuttings, or *pipings* of *Pinks*, may be put in at the beginning of the month under a

hand-glass, if one is to be had; but if not, under shade somewhere; not of trees, by any means; but it would be well to select a place for a cutting bed, and if raised up by a slight hotbed of short grass and dung, and covered with fine soil, mixed with sand, and a few slabs run round it to keep it up, so much the better; and cuttings of many things may now be put in, as *Pansies*, *Dielytras*, *Alyssums*, *Pinks*, *Carnations*, *Phloxes*, and *Rockets*. The latter had better be in a month earlier; though, if left now, and a few roots are taken up by the middle of August, they will furnish a number of good half-rooted plants, at once fit to plant in some nursery bed; the principal secret in propagation being to put everything in at its proper time. Nature does much of the rest. *Bud Roses* as wanted, and layer young shoots of Moss, and other kinds which produce suckers sparingly, and they will root freely; and as the garden is supposed now to put on its best apparel, let nothing be wanting to improve the general effect; keep the grass short, and, if needs be, watered; the walks clean and well rolled, and neatly raked, not that hard, surface smoothness which betokens something very stubborn underneath, but a fair proportion of loose earth at top, through which the rake's teeth will freely pass; the plants being also neatly in order, not showing any stiffness, or tightness in tying, but just that necessary assistance which the altered circumstances of their condition (from that which nature intended for them) requires; and with but little labour this can be effected, if, as said above, the right job be done at the right time; afterwards, the same thing cannot be done so well, however skilful the operator, and it often takes more doing too.

SHRUBS.—Although the small space in our original plan allows but little room for Shrubs, yet, as they seem indispensable everywhere, and most likely exist here, some little attention must be paid, at this season, to see that a coarse growing one does not overtop a more delicate or valuable specimen. Regard must also be had to views, or screens, as the case may be; or, if certain Box or Laurel be cut to certain shapes, now is the time to do that work; dull, moist weather is the best, and as time may not be an important affair with the amateur, I may observe that the knife is a better instrument than the shears, as, by a little care, the leaves need not be cut through, and, thus, much of after-rustiness avoided. Where it is necessary to cut away at a gateway, or other place, avoid, as far as possible, giving the plant a clipped appearance; also, be careful, in cutting any shrub, always to cut the top part most in, and do not let them assume "an over-hanging" character. If the shoots of *Syringa* are thinned out after flowering they will bloom much finer another year. Cut but little at the *Portugal Laurel*, or any of the *Pinus* tribe, as they are impatient of the knife; and these ought not to be planted in stations where pruning afterwards is expected to be necessary, as, in most, it spoils their appearance. See that any newly-planted shrub is firm in the ground; and, if it requires staking, see that it is securely done. Water, now and then, in dry weather, will also be useful.

J. ROBSON.

POTATO DISEASE IN CORNWALL.—We regret hearing from a trustworthy correspondent "that the potato disease has again shown itself in the neighbourhood of Penzance." He adds, "My only surprise is, that the continuous cold and wet of the last month has not caused its development at an earlier date. It appears in this instance to have attacked the plant in an open, sunny field, leaving untouched the far more luxuriant haulm of plants growing in an adjoining garden."

ALLOTMENT FARMING.—JULY.

THIS is a month when the cottager should reap the full benefit of his industry and forethought; his crops of vegetables and fruits will be sufficient to supply himself and family with an abundance, and some to give to his pigs, or cow, if he has one. No spare ground should now be seen in the allotment; and every crop, as soon as it has done bearing, should be removed, and its place filled-up by another. The hoe should be applied at all favourable opportunities.

WINTER GREENS.—The principal crops should be planted this month. If the weather is very dry, it is a good plan to puddle the roots of all plants at the time of transplanting; it is done by making a small hole, in any part of the ground, and pouring some water into it; when well mixed, and made to the consistence of thin mortar, the roots are dipped into the puddle until it sticks to them, and preserves them from, or rather counteracts, the ill effects of drought.

CABBAGES.—Some of the May sowing may now be planted out, about one foot apart, for autumn and early winter use.

STRAWBERRY-BEDS.—The strongest runners should now be selected for transplanting; they delight in a good, stiff, loamy soil. Those who cannot spare ground for a new plantation may prick them out in a prepared bed, six inches apart, and remove them, with balls, in October.

BUDDING ROSES, CHERRIES, PEACHES AND PLUMS.—This operation may be performed during the early part of the month. One practical lesson on the subject would be more useful to a novice in the art than a page of letter-press without diagrams; a good, plump bud should be selected for inserting into a healthy, free-grown shoot, at the height that may be considered most eligible.

SUMMER PRUNING OF FRUIT-TREES.—About the end of the month the breastwood, or any other shoots that appear where they are not wanted should be cut or pinched off. At the time the fruit is set, the greatest demand is made upon the sap, and then, by proper pruning, for greater exposure to atmospheric influences, light, and air, the supply is ready-stored up to meet such demands. About the beginning of October, a few inches of the tops of the branches should be cut off, as we are but rarely favoured with sufficiently fine autumnal weather to ripen the whole length of the shoots; by so doing, the descent of the cambium, or proper sap, would become more concentrated in the remaining buds, and, therefore, would add materially to the productiveness of the trees the following season.

KIDNEY BEANS.—The last principal sowing should now be made. In dry weather it is advisable to give a good soaking of water to all crops, such as Peas, Beans, Cabbages, &c., a short time previously to the earthing-up.

PARSLEY.—A sowing may now be made to get strong plants before winter.

HERBS.—Those for drying, or distilling, should be cut before the flowers expand, as they very soon afterwards lose the qualities for which they are most valued.

THE SUCKERS OF RASPBERRY STOOLS should be thinned to four or five of the best canes, and tied up loosely to save them from the wind.

VINES on open walls should now be looked over to stop the shoot at the first joint above the bunch, to remove all rank shoots and laterals; and, when a second shoot appears, to stop it at the first joint; to thin the bunches and berries, if too thick, and to tie up all that have shoulders; to keep them thin of branches, that a free circulation of air may pass through the leaves, and to apply liquid-manure to the roots during their season of active growth.

TURNIPS.—The *Dutch*, or *Stone*, should now be sown for the main crop in the allotment; and *Dale's Hybrid*, where a cow is kept.

WINTER SPINACH.—Towards the end of the month a sowing should be made in deeply-trenched and well-manured ground; it succeeds best on raised beds, or in any high, or dry situation.

MANGOLD WURTZEL, CARROTS, TURNIPS, and other such crops, require early attention in singling out the young plants, in keeping down weeds, and by deep hoeing; or, what is better, forking between the rows.

CUTTING WHEAT BEFORE IT IS RIPE is a subject upon which many experiments have been made, and the results

exhibit the policy of cutting Wheat before it is dead ripe. The theory upon which Mr. Hannam, of North Deighton, near Wetherby, explains some astonishing results is, that as the sugar becomes changed into the starch of the Wheat, so, if permitted to remain till fully ripe, another change will take place, the starch becoming gradually converted into *woody fibre*, for it is a well-known chemical fact, that sugar, starch, and fibre, are composed of the same constituent elements, united in the same proportion, and are one and the same substance in various forms—in some such way as water, ice, and snow are different forms of one combination of oxygen and hydrogen.

This gradual change to woody fibre takes place in many vegetables, and it is by taking it into account that we can explain the curious fact, shown in his tables, that the ripe Wheat contains *fifty per cent* more “flinty particles,” “pollard,” or “sharps,” than the “raw cut grain.” Hence, it is no wonder that the flour of the ripe should be less *free* in the grain.

Mr. Hannam also claims a “better quality of flour” for the raw cut grain, and quotes the analysis of Professor Johnston, to whom samples were sent.

The quantity, that is, the weight of straw, must, it is evident, be increased; and it is equally true that its quality is improved owing to there being more soluble matter in the *fresh* than the *dry* straw. In fact, the additional weight of straw is nearly all an additional weight of nutritive matter, starch, sugar, &c., which would, when dead ripe, have become fibre; and, therefore, is of great consequence to the value of the straw, either as an article of food or as a manure.

The advantages claimed for cutting early are a better quality of flour, a greater quantity of straw, and a better chance of securing the crop.

Our object is to give our readers an idea of the case as it now stands, and to draw their attention to the further investigation of the subject.

In conclusion, we give Mr. Hannam's estimate, based on his experiments, of the money value of an acre of the same Wheat cut *raw* and *ripe*,—

Cut a fortnight before ripe	..	£14	18	0
Fully ripe	.. .. .	13	11	8

CARNATIONS AND PICOTEEs.—The most forward should now be layered; they should be pegged down in light soil, consisting principally of leaf mould. Continue to put in pipings of *Pinks*, as well as cuttings of *Pansies* and *Roses*.

HONEYSUCKLES, CLEMATIS, OR ANY OTHER CLIMBERS on the cottage walls, should be neatly trained up, but not so as to give them a stiff or formal appearance. The whole secret of cottage, and even of more general, gardening, depends upon immediate attention. Not to defer until to-morrow what is really necessary to be done to-day, as a multiplicity of business may distract the attention until the neglect will become painfully palpable, when it may be too late for remedy.

It is by doing everything well (however trifling it may appear to others) that a system of general good management is perceptible from the highest to the lowest departments of gardening.

How delightful it is, in a ramble through the country, to stop before a cottage, of which the neat thatch is unbroken, the latticed windows are whole, the white-washed walls are without spot or blemish, round the porch of which the Honeysuckle is trained in regulated luxuriance, and the garden is gay with bright-hued flowers. It exhilarates one's spirits, and produces a train of thought that the days, to the inhabitants of such a cottage, are pleasant; that they are contented to bear the cares and crosses of life with submission, without murmuring, as the conditions vouchsafed to fallen man, and looking forward to the rewards of their submission to the commands and will of God in a mansion not built by hands.

WILLIAM KEANE.

NOTES FROM PARIS.

In the articles which I have sent you, from time to time, I have had occasion to notice the fruits and vegetables which are commonly cultivated in the gardens round Paris, and brought to market. One of the latter, however—*Rhu-*

barb, has not yet been touched on; simply, perhaps, because it is not to be seen here; and I believe it is but very little known in France. At the present day, while hundreds of acres of it are grown in the gardens round London alone, and while there are in France—Paris in particular—thousands of English families, to whom it is as necessary as Cauliflower, or Green Peas, it does seem strange that *Rhubarb* has made so little way on this side of the channel. Ask for it in any of the markets here, where, at the present season, all other vegetables are abundant and cheap, the chances are that none of the polite and intelligent “Dames” can tell you anything about it; or you may be asked, perhaps, if it is like a Turnip or a Cabbage. Lately, however, some of those who make it their business to enlighten the public on such matters here have strongly urged its introduction and cultivation; and, as the French are quite as fond of tarts and other *pâtisseries* as the English, there can be no doubt that in the course of a few years more *Rhubarb* will be common enough in Paris. At present, Strawberries and Cherries are employed by cooks and confectioners much in the same way as *Rhubarb* is used in England. A writer in the *Almanach du jardinier* very justly observes, in reference to this subject—“The time when our market-gardeners raised but a very limited supply of Cabbages, Turnips, Carrots, and Leeks, is not yet, historically speaking, very far back. The exact date of the introduction to France of Salads, Cauliflower, Brocoli, and Scorzoneria, is well known. The introduction of Spanish Chicory, which is now grown by everybody, is but of recent date. All these vegetables have begun by being rare. They have all made their *debut* amidst much opposition, or have met with but a cold reception; but by-and-by they became so necessary that people were at a loss to understand how our kitchen-gardens could have dispensed with them.” The moralist may be consoled in reflecting that even such things as Turnips and Cauliflowers are not exempt from that neglect which is but too often the heritage of genius.

While I am speaking of vegetables, I may just notice that *Asparagus* and *Cauliflower* are, perhaps, the most abundant at present, as they have been for some time. The market-gardeners here do, certainly, understand how to give volume to these two favourite esculents. The former are usually as long and as thick as wax candles. The variety of Cauliflower in general use here is that raised a few years ago by M. Lenormand, a nurseryman of Paris. As to flavour, this variety is allowed to be at least equal to that of any other; but it is chiefly distinguished by its greater size, the heads being about twice the weight of those formerly grown. *Spinach* is not so common here as it is in England, so far as I can see; but immense quantities of *Sorrel* are consumed all the year round. Besides being cooked as a separate dish, like Spinach, in England, *Sorrel* forms the principal ingredient of one of the commoner soups—*soupe à l'oseille*; and it is sold ready-cooked, like Spinach, by every green-grocer. But I must say, the soup is anything but inviting to look at.

In a former communication, I noticed the fondness of the Parisians for growing flowers and plants at their windows and balconies. I find, from further observations, that my notes have not been more than truth would warrant; though the allusion to “tea-garden in miniature” might seem to be associated with Cremorne or Vauxhall; but I hope it has been understood that all I meant was, that people might be often seen, at the setting of the sun, enjoying their evening repast on the balconies and terraces near the roofs of the houses, under the shade of trellises covered with flowers and foliage. Indeed, when the terrace is five or six feet wide—as at the tops of the houses it generally is—it becomes the favourite sitting-room of the family, or the lodger, and is often furnished and decked out with great taste, even to the gilding of the railing and the hanging of fancy curtains. For let it not be supposed that those who live at the top of a house having such a terrace are merely poor needle-women, or obscure artists. By no means; they are more likely people who can afford to have their chairs and sofas covered with velvet, and lounge away their evenings in looking down from their giddy height on the equipages and *promeneurs* that crowd the Boulevards and other leading thoroughfares of this magnificent capital.

Nothing sets off a spacious street so much as these

balconies and terraces, when well filled with plants and flowers, and when they happen to be empty the contrast is remarkable. I have seen some of them, when not all covered in with trellis work, having young trees of Lime, Maple, and Elm, six or seven feet high, with wide-spreading branches over head, which afford as much shade as is wanted; and there is, besides, what is called a *Berceau* at one end of the terrace neatly trellised over, and in which there is a Divan, or one or two seats. *Cobea scandens* is one of the commonest trellis plants here out-of-doors. The Virginian Creeper is not so common, I think, as it is in England. The White Jasmine and one or two Passifloras are not unfrequent; Convolvulus, Clematis, Nasturtium, and Scarlet Runners, are, as usual, very popular in these Aërial gardens; but Standard and Climbing Roses are the favourites; and they are just now coming into season. The terrace-gardens are arranged in a variety of styles; and instead of large, bushy plants, and a trellis covered with climbers, moderate-sized plants are preferred. In such a case, the balcony or terrace is covered in with stout, coloured calico, the front having curtains which can be drawn at pleasure when the sun is hot, or the nights cold. Sometimes you may see an elegant aviary at one end, in which a dozen of happy birds, of various colours, keep up a continual concert. Sometimes a large cage, with a richly-plumed parrot, may be seen in the centre. Here, the good lady of the house, with her children, may be often seen plying her needle during the afternoon. Many a charming Havanna is consumed here after dinner, in the warm evenings, and many a litre of ruby wine.

In order to prevent anything like litter in the interior of the house from frequent carrying out and in of plants requiring fresh soil, or other attentions, a quantity of soil, with pots, and sticks, and trowels, and scissors, are kept in a cupboard-like box at one end.

With the sloping style of building, and the remarkable strength and solidity of the houses here, these terraces are divested of everything which might give rise to the slightest apprehension; and I think it is much to be regretted, that even in Paris they are not more general. In the new houses, such, for instance, as those in the *Rue Rivoli*, they are not adapted, though there is no lack of fine balconies.

We have had some very warm weather lately; and vegetation is advancing rapidly. There is, however, some fear, according to weather-wise people, and lovers of old sayings, that we may have more than enough of rain for the next three or four weeks. Old inhabitants here say, that if it rains on St. Medard's Day we are certain to have wet weather for forty days. Now, this day happened to fall on the 8th inst., and though up to ten o'clock on the night of the 7th everything looked fair and promising, it was forebodingly observed, by several noticing persons, that their cats had just taken a fancy to rubbing themselves about the ears. Some also testified that the swallows, contrary to usual practice, had been flying very low all the afternoon. These stories were listened to with great uneasiness by those who had made up their minds to go to the Garden of Plants and the Universal Exhibition the following day. But it was hopefully resolved not to give them credit: and this decision it was believed would, at least, have considerable effect in warding off the evil so much dreaded by those who have not heard much of parched ground and dry streams. But almost as soon as the clock had struck twelve the rain began to fall; and the whole night and morning it came down in such torrents as if all the water of a deluge was being poured on the earth at once. Since then we have only had one or two dry days. In general, we have more or less rain every day, particularly in the morning; and, what is not common here, we have had one or two very fierce hurricanes, which lasted only ten or fifteen minutes, and then everything was quiet and calm and sunny again. Within the last two days, indeed, the wind has been rather strong and gusty.

Every other day brings into Paris some fruit or vegetable for the first time this year. I have just seen a basket of *Apricots* and some *Red Currants*; but they will not be plentiful for a week or two yet. *Green Gooseberries*, which are used so freely for tarts in England at the present season, are scarcely seen at all in any of the minor markets. The reason is, as I am informed,

that the Government, in discouraging the sale of unripe fruit among the people, extend their ban to the Gooseberries. But apart from this, I believe the climate is not favourable to the cultivation of this excellent fruit. Gooseberries, whatever the reason may be, are by no means in such favour here as they are in Lancashire. Currants are extensively grown, and, when in season, very abundant and good. These two fruits are not always distinguished by translators, and even in some Dictionaries they both take one and the same name in French—that of *Groseille*. But the Currants are commonly known here as *Groseilles à Grappes*, and Gooseberries as *Groseilles à Maquereaux*. The latter were so named at first, from the fact that they generally formed the principal ingredient of a sauce used with mackerel, and they happen to be in season about the same time.

The Cattle Show in the *Champ de Mars* proved a very fine turn-out; and, as appears from the official list, a great number of prizes were taken by English gentlemen and farmers. The highest prize, in eight different classes, was £40. This was given for the best male in the Durham, Hereford, Devon, Ayr, and Holland breeds in the Bovine Class. These prizes were awarded to the Marquis de Talhouet de Lude; Lord Feversham, of Duncombe Park; Lord Berwick; Lord Talbot; Mr. Turner, of Exeter; the Director of La Colonie Agricole de Gaillon; and M. Boulton Leveque.—P. F. KEIR.

THE APIARIAN'S CALENDAR.—JULY.

By J. H. Payne, Esq., Author of "The Bee-Keeper's Guide," &c.

SWARMS.—The first swarm that I have heard of this year was on the twenty-seventh of May, and the next on the twenty-eighth, and these are the only two that I have heard of. The one was at Bushey, in Middlesex, and the other at Colney, in Norfolk; but there will be few swarms, I fear, from the weak state of the stocks generally; and what few there happen to be will be lost to their owners, without much care is taken in hiving them as soon as they alight; and for this reason,—so many stocks having died this spring, and some leaving a little honey in their hives, which their owners have neglected to remove from the Apiary, is almost sure to induce a swarm from a distance to take possession of it. This leaving deserted hives in the Apiary, in a neighbourhood where Bees are kept, is a most unfair and unneighbourly act, for the hives are almost sure to bring Bees from a distance to occupy them. Indeed, one of the swarms above mentioned came in this manner. I am not quite sure, but I think there is an Act of Parliament still in force to prevent this practice.

THE SEASON.—I fear this season also will have to be numbered with the many by-gone ones as a bad honey year. I am now writing on the thirteenth of June, and this day may be called the first honey-gathering day that we have had; a dozen more such in succession would fill all our supers; but a lowering mercury, and lowering clouds, tell that a change is nigh. However, the season being a trifle later than usual is in favour of our little pets; but should we be so fortunate as to have a week or ten days like the present one, the supers must be carefully watched, for they will fill rapidly; and where swarms are not desired, a second super must be supplied before the first is quite filled.

DRONE BEES.—Drones made their first appearance here on the twenty-eighth of May; this is about ten days later than usual.

SECOND SWARMS.—Second swarms this season must not be allowed to remain by themselves, but either be united to first swarms, or returned to their parent hive, or two be put together. It frequently happens that two second swarms put together will make as good a stock as the prime swarm itself.

HORTICULTURAL SOCIETY'S EXHIBITION.—

CHISWICK, JUNE 20TH.

MR. BEATON will give his usual report of this Show next week, therefore, we shall merely observe that the display was excellent, as usual, and that the visitors consisted of many

of the nobility and leaders of fashion, but were not so numerous as might have been desired. Among them were the Duke and Duchess of Northumberland, the Duchess of Sutherland and party, the Prince and Princess Doria, the Marchioness of Hastings and party, the Earls of Scarborough, Ilchester, and Bradford, Countess of Bradford, Countess of Macclesfield, Lady Granville, Lord Campbell, Lord and Lady John Russell, Lord and Lady Wenlock, Lady Charlotte Dennison, Lady W. Fitzroy, Lady C. Wellesley, Lady Cooke, and the Bishops of London and Winchester.

The principal awards were:—

First Large Gold Medal.—Sir John Cathcart, F.H.S. (gardener, Mr. Dods), for Stove and Greenhouse plants; Mr. C. B. Warner, F.H.S. (Mr. Williams), for Orchids.

Second Large Gold Medal.—Messrs. Frazer, Lea Bridge, for Stove and Greenhouse plants; Mr. H. B. Ker. (Mr. Wooley, gardener), for Orchids.

First Gold Knightian Medal.—Mr. J. Philpotts, for collection of plants; Messrs. Veitch, for Orchids.

Second Gold Knightian Medal.—Messrs. Rollisson, for Orchids.

First Gold Banksian Medal.—Sir Edward Antrobus, F.H.S. (Mr. Green), for collection of plants; Mrs. Ellis (Mr. Gidney), for Orchids; Messrs. Rollisson, for Heaths; Mr. A. Rowland, for Roses in pots; Messrs. Lane, for the like; Mr. E. Forster, for Pelargoniums; Mr. Turner, for ditto.

Second Gold Banksian Medal.—The Duke of Norfolk (Mr. M'Ewen, gardener), for collection of fruit; Mr. W. F. G. Farmer, F.H.S. (Mr. Carson), for collection of plants; Mr. J. Bradbury (Mr. Rover), for Cape Heaths; Lady Giles Puller (Mr. Terry), for Roses in pots; Messrs. Paul, for the like; the Rev. E. Coleridge (Mr. Holder), for Pelargoniums; Messrs. Dobson, for the like.

Silver Gilt Medal.—The Duke of Sutherland (Mr. Fleming, Trentham), for collection of fruit; Mr. C. H. Leigh (Mr. James), for collection of Peaches and Nectarines; and Mr. J. Bradbury (Mr. Roser), for collection of plants; Messrs. Veitch, for variegated plants; Mr. W. F. G. Farmer (Mr. Carson), for Orchids; the Duke of Northumberland (Mr. Ivison), for the like; Messrs. Fraser, for Cape Heaths; ditto, for Pelargoniums; Messrs. Francis, for Roses; Mr. J. M. Strahan (Mr. Maher), for Pelargoniums.

Large Silver Medal.—Lord Boston, F.H.S. (Mr. Robinson), for Providence Pine, 7 lb. 4 oz.; the Duke of Marlborough (Mr. Turnbull), Cayenne Pine, 4 lb. 9 oz.; ditto, for White Grape; the Duke of Sutherland (Mr. Fleming, Clevedon), for Black Hambro' Grapes; Mr. Clements, for collection of fruit; Mr. Ingram, gardener to Her Majesty, for Cherries; Mr. Smith, for Strawberries; Baron Rothschild (Mr. Forsyth), for Vines, in pots; Mr. Cutbush, of Barnet, for collection of plants; Mr. Coles Child (Mr. Morris), for the like; Messrs. Jackson, for cut Rhododendrons; Messrs. Rollisson, for variegated plants; Messrs. Veitch, for plants with fine foliage; ditto, for Liptadactylon californicum; and for Rhododendron, Princess Royal; Mr. J. Butler (Mr. Kule), for Orchids; Mr. J. Coster (Mr. Taylor), for Heaths; Mr. R. Robinson (Mr. Sage), for Roses in pots; Mr. E. Foster (Mr. Nye), for Pelargoniums; Mr. Gaines, for the like; Mr. J. Hodgson, for fancy Pelargoniums; and Mr. Turner, for the like.

NOTICES OF BOOKS.

THE FAMILY ECONOMIST; AND ENTERTAINING COMPANION FOR TOWN AND COUNTRY. Small 8vo. London: Groombridge.

AMONG the mass of cheap literature which besets our path on every side, it is pleasing to find, here and there, some resting-places where one can sit down for a little while and find enjoyment and profit. We have found one of these resting-places in the form of a goodly shilling volume of 186 pages, which contains something on every subject to interest everybody—young and old alike. Its style is suited to all capacities and to all grades of society, and whoso attempts to drink and is not refreshed must blame himself. Pleasing Tales, Sketches of Domestic Life, Popular Science, Biographies, Arts and Manufactures, Poetry, and Odds and Ends of all kinds compose this agreeable volume. Among the Biographies we see one of "Old Humphrey," in whose society, while living, we have spent several pleasant hours; and whose beaming countenance, large heartedness, and efforts for good were the impersonation of what our readers may find in *The Family Economist*.

THE CORAL NECKLACE. By Charlotte O'Brien. London: Groombridge, 16mo.

THIS is one of the series of "Buds and Blossoms," and is an interesting little story for little people, well calculated to enjoin obedience to parents, and inspire decision of character.

OUR BOYS: WHAT SHALL WE DO WITH THEM? By G. E. Sargent.

It is a question of every day occurrence "What do you

mean to do with your boys?" but the reply is rarely as direct as the question. To those who are in difficulty on this point, we would recommend them to read this little book, which is written by one evidently conversant with the subject, and who appears to have embodied his observation and experience for the common good.

QUERIES AND ANSWERS.

GARDENING.

PRUNING PINUS AUSTRIACA.

"Some time ago, in describing Mr. Rivers' Nursery, you mentioned a specimen of *Pinus Austriaca*, which had been so skilfully managed it had been brought to assume the dense, handsome habit of *Pinus insignis*; but you did not give very explicit instructions how this was accomplished. I understand the plan to be to stop all the shoots, except the leader, at a certain period of their growth; but what I want to know is exactly when this should be done. For instance, should the shoots be two inches long, or more; or how long? and if stopped, will they, or should they, push side-shoots the same season? I should be much obliged by this information.—C. F. P."

[The *Pinus Austriaca* referred to was at the Nurseries, Sawbridgeworth, Herts, and Mr. Rivers has obliged us by the following information concerning it.

"At this season of the year the shoots of Pines are, as is well known, like Asparagus, in their brittle nature, and are easily snapped off with the thumb and finger. Some eight years since, I was struck with the vigorous growth of an Austrian Pine standing in the nursery, which I had left as a specimen; and fearing it would occupy too much room, I commenced to—what is called in forest-tree pruning—fore-shorten; this I did by snapping off to about half its length the central shoot of each horizontal branch. This kind of Pine generally puts forth from three to five shoots in a cluster. Mind, I broke off only the central one of each horizontal branch, leaving the leading cluster untouched. I had no definite idea as to the effects of this kind of pruning when I commenced, but I am much gratified by the character of my tree, which I have thus pruned every year in June. It is a compact mass of foliage, and really a noble tree, entirely unlike the vigorous but rather spreading habit of the Austrian Pine. I believe that this fore-shortening may be carried to a most beneficial extent on the ornamental Pines in our pleasure grounds, many of which are too straggling and bare to be ornamental, unless placed on the crest of some wild, rocky hill.—THOS. RIVERS.]

FRUIT-TREES INJURED BY NAPHTHA VARNISH.

"Having been a subscriber to your useful Magazine ever since it was first published, I think I may be permitted to ask your opinion respecting a plan I adopted this year for protecting wall-fruit, as I wish to ascertain if I am right in my conjecture as to the cause of my failure, and it may be the means of preventing other parties from falling into a similar error.

"A friend of mine recommended me to place a board, ten inches wide, under the coping brick of a south wall, and from thence to suspend old fishing-nets, and over that some of Haythorn's Hexagon Netting, as under that system she always had an abundance of Peaches and Nectarines every year.

"I have just seen the trees of this lady, and they are as healthy as possible, and so covered with fruit that hundreds must be removed.

"I pursued exactly the same plan, and with me it was a complete failure, and my trees are greatly damaged. The board appeared to prevent the development of the leaves. At the bottom of the trees they came out as usual, healthy and strong, but the upper leaves gradually became less healthy, until towards the top of the trees the buds could hardly burst. I have mentioned the circumstance to several gardeners, but they were not able to solve the cause. At

length I named it to my friend, whose plan I had adopted; and when I told her that the boards had been, about two years ago, covered over with naphtha varnish, which is a sort of gas-tar, she said at once that she felt certain that it acted as a poison to the trees. I should mention that I placed similar boards over two Apricot trees without the netting, with a like result. For about two feet under the boards the leaves were unkind, and not half so forward as the rest of the tree. One other thing I ought to state, that the Hexagon Netting was dipped in a tan-pit. My garden is low, situate in the valley of the Severn, and, notwithstanding all my precautions, the severe frost about the 5th of May destroyed all my fruit.—A. F. S."

[In low-lying situations, the worst possible for fruit-trees, there is the greatest difficulty in preserving the blossoms from the spring frosts. Wall-fruit should there especially be grown under glass-protected walls. The diseased state of your wall-trees' leaves we have no doubt arose from the naphtha-varnished coping boards. We recently saw a garden wall which had been painted with gas-tar, which had occasioned similar injury to the trees trained against it. We incline to think that it is the creosote in the gas-tar which is so injurious to the leaves of growing plants. A drop of creosote put upon a leaf destroys its texture. It is a most pungent poison. Flesh meat immersed in a solution of creosote for some minutes has no tendency to putrefy; and it is the creosote in the smoke of burning turf and wood which renders them so efficient in the curing of hams, bacon, and fish, imparting to them their peculiar flavour. A few drops of creosote in a saucer, or on a piece of blotting-paper, if placed in a larder, effectually drive away flies, and make the meat keep several days longer than it would if the creosote were not there. A small quantity added to brine, or vinegar, imparts the "Westphalian," or smoky flavour, to meat. This violent, penetrating agent is abundantly present in gas-tar, naphtha-varnish, and similar preparations.]

THINNING GRAPES.

"In June, 1852, I planted some Vines in a small, cool greenhouse, which have all made good progress; but amongst them is a *Muscadine*, which has not only grown luxuriantly, but would have borne a fair crop the following season (1853), had it not been prevented by advice kindly afforded to me in your correspondents' column. This season it has produced two bunches on each lateral, between seventy and eighty altogether. Should not a large portion of them be removed?—EDWD. DENT."

[You had better remove about one-third of the bunches, leaving the largest and most promising, and let these be freely thinned of the smallest berries.]

PRUNING A BEECH HEDGE.

"Last autumn twelvemonths I planted a Beech hedge with plants, about five feet high, that had before formed a hedge in another place. Last summer they did pretty well. This summer they are, I think, doing better; but a good many of them are dead a good way down the plant from the top, but breaking out below. Would you advise me to cut the dead part away *now*, or leave them until the autumn? My knowledge about planting is so little, that that must be an excuse for my troubling you. Some few of them are *all* dead; these I have concluded to leave standing until I replace them in November, as by taking them out now it would disturb the roots of the others, I think.—SUBSCRIBER."

[Cut all the dead wood away *now*, and remove also the dead trees, as they must necessarily interfere with the living ones on each side of them. No injury will be caused to the roots of those left standing.]

THE MANGOSTEEN: WHO FIRST FRUITED IT IN ENGLAND?

Not long since a drawing of the Mangosteen appeared in "The Illustrated London News," where it was stated it was "considered by those conversant with the difficulties attending the labour as one of the greatest triumphs of modern Horticulture. This being, we believe, the only successful attempt made since the introduction of the plant into England in 1729. It is to the care and skill of Mr. Iveson, head-gardener to the Duke of Northumberland, Sion House, that this successful result of exotic fruit culture must be mainly attributed." Mr. Beaton informed us, in his *Life*, that he is favoured with an excellent memory, and from other memorable information which he has been pleased to give, I will suppose he may have known Walcot Hall, Salop, some twenty-five years ago. If so, when he has "nothing else to do!" would he be good enough to assist us with his memory, as to whether the late Earl Powis was not the first person who fruited the Mangosteen there about that time; and did he not present one of its fruit to A. Knight, Esq., of Downton Castle, the then President of the Horticultural Society, as being the first of "all the fruits of the East" ever brought to perfection in England? Such was the fact, I believe; and to all who know what an enthusiast the present Earl's grandfather was, and to what a practical extent he entered into Horticultural experiments at Walcot, they will cease to wonder at any extraordinary achievement having been arrived at there.

This enthusiasm was catching, as shall be shown. My odd man of yore was the stupidest fellow about gardening matters possible to conceive, but he could fall any tree upon the exact spot required. Something outrageous he had committed, one day, caused me to tell him he was no more fit to be trusted at large in the garden than a cow! He indignantly repelled the idea, and begged to remind me, that he had once lived with the "Yarl Powis," and that he considered himself capable (by reason of that, I suppose,) of managing any garden, provided there was not a "vast quantity of glass!" His employment under the "Yarl" was the care of a team of mules.—UPWARDS AND ONWARDS.

VINEGAR.

MR. EDITOR.—As one of the readers of THE COTTAGE GARDENER, I take this opportunity of thanking you for the trouble you take in catering for our instruction and amusement, and to send you a few notes I have on Vinegar, the subject having been suggested to me by the season of the year, and by the observations on "the Vinegar Plant" in one of your recent numbers. I do not know what some of the stuff is which is sold for vinegar; but I recollect, some years ago, we had a large crop of Tomatoes, too large to have allowed the whole to remain to ripen, and we made up our minds to pickle a certain portion of them green. We were not then up to the way of making our own vinegar, and therefore sent to the nearest market town for a supply. We pickled our Tomatoes, and bottled them. We did not use many of them during the winter; but what we did use were good enough, though nothing like what we now make with our own vinegar. In the summer following, to our astonishment, our stock of pickles became putrid and wholly unfit for use. We are told, too, that the beautiful green pickles, which we buy in shops, are preserved of that colour by the addition of copperas, or some such deleterious substance; and it, therefore, cannot be wondered at that there should be so many with weak stomachs and injured constitutions in the world, when we think of the quantities of poison we eat, as has been from time to time revealed in the *Lancet*, and again recapitulated in the *Edinburgh Review*. However, as we make our own vinegar, and our own pickles, and know what is in them, I shall tell you how we prepare the former. Take yellow or white Gooseberries, when they are quite ripe, and bruise them to a pap in a tub with a wooden pestle, and to every two gallons of this pap put two gallons of water. After mixing them well together, let it work for two or three weeks, stirring it two or three times a-day. Then strain the liquor through a hair-sieve, and to every gallon put one

pound of brown sugar, one pound of treacle, and a table-spoonful of fresh yeast. Let it work for three or four days, and then put it into a cask. When it has stood for twelve months it may be bottled, and then it will be strong enough for anything.—ROGER ASHPOLE.

DERIVATION OF NEMOPHILA.

I am one of those who, even from 1833, have always spelt *Nemophila* as you have it in the *Cottage Gardeners' Dictionary*; and as all botanists have written and printed it; but, seeing in your last number that "H. G. M." tells us we are all wrong, I began to rub up my Greek, and see whether or not, since the days when I used to bite my lips over Homer and Anacreon, I had not got rusty. On reference to the Dictionary, I find *Némos*, rendered *Nemus*, *locus arboribus densus*; so that a word composed of *Némos* and *Θαλέω* is not a "Græco-Latin monster" after all. Thanks to "H. G. M." for his ingenious "*Nemophylla*," notwithstanding.—NEMO.

SEEDLING OAKS AT BELVOIR CASTLE.

In the last number of THE COTTAGE GARDENER, at page 209, "ARBORIST" asks why seedling Oaks do not spring up in the woods at Belvoir Castle? and as a reason why he thinks they should, he says, "Mice do not at all abound, and squirrels are destroyed to a great extent." Now, I think that is just the reason why the Oaks do not spring up. We know that the habit of the squirrel is to hoard up a store for future use; and that they very frequently bury acorns in holes with the intention of finding them again when they are wanted; but either forgetting, or not being able to find where they were put, the acorns vegetate, and not unfrequently grow up to timber-trees. Many a sturdy, stalwart Oak, who is now extending its giant arms in defiance of the elements, owes its origin to a little squirrel; and who knows but the prow of some of these floating leviathans now in the Baltic did not once form a store laid up by that instinctive foresight which mortals would sometimes do well to imitate. Why destroy the poor little gamboling squirrels?—BETA.

TO CORRESPONDENTS.

CUPRESSINÆ AND JUNIPERINÆ (*An Old Subscriber*).—You have transgressed the rule, in writing to Mr. Appleby. You should have sent your letter to the Editor, but as others may, like you, be ignorant of the meaning of the words you mention, your letter shall have an answer. In the first place, it was not at Sion where Mr. Appleby saw the trees he mentions, as having suffered severely, but the Royal Gardens, at Kew. In the next place, when he says, that *Cupressinæ* and *Juniperinæ* had been greatly injured by the winter, he meant, in plain English, that the Cypresses and Junipers, and all genera placed under those sections of Coniferæ, had suffered by the severity of the winter. Surely some of your friends, or some of the publications you say you have consulted, ought to have known the meaning of the two names he mentions. In future, send all your queries to the Editor.

PITS (*F. W.—, J. B. M., and others*).—See what Mr. Fish says to-day.

SUMMARY OF NEWS (*J. J. Miller*).—We do not intend to give a separate summary. All the news we think within our scope will be spread throughout our pages.

DAISIES ON LAWN (*J. J. Batiman*).—We know of no other mode of destroying them than spudding them out; and a sharp chisel is excellent for the purpose. Do any of our readers know of a better method?

FLOWER-GARDEN PLAN (*An Old Subscriber*).—The design is very original, and may well be "admired," but, practically, the shape of the beds is extremely faulty, every one of them has one, two, or more sharp points, which no bedding-plant can occupy, without running constantly on the grass. But it is well worth engraving.

COTTAGE GARDENERS' DICTIONARY (*A Young Gardener*).—This may now be had at Mr. Bogue's, Fleet-street, London, and may be obtained through any bookseller.

MULCHING (*Lælius*).—You will have seen this defined in our last number. In the Dictionary mentioned in the preceding paragraph all these terms are explained.

WOODLICE.—*E. B.* will be very much obliged, and so shall we, by any reader stating a mode of getting rid of these pests from frames.

NAMES OF PLANTS (*F. W. S.*).—Yours is *Ceanothus azureus*. (*Lancastriensis*).—The pink flower, *Phlox subulata*. The small white, *Ranunculus aconitifolius plenus*; the large white, *Ornithogalum umbellatum*, and the blue, *Centauraea montana*. (*J. A. S.*).—*Orobanchæ minor*, the Broom Rape. It must have been in the earth used for potting the *Heliotrope* cuttings. (*A Subscriber*).—*Spiræa Hypericifolia*, or *Hypericum-leaved Spiræa*. Its white-blossomed, slender twigs, are often employed as wreaths for ladies' hair. The colour of your *Turkey Poults* may have come from their grandfather or grandmother; certainly not merely from the hen sitting upon them. Colour often reappears from a very distant ancestor.

EVERLASTING ROSE.—*M. D. P.* says,—"Some years ago, a seed-pod of some species of *Mesembryanthemum* was sold in book-shops, which expanded when placed in water; the name the shopkeepers called it was 'The Everlasting Rose.' Could you give me the correct name? I raised several plants from the seeds contained in the pod—the flower was yellow." Your plant may be the *Mesembryanthemum calendulaceum*—the Pot-Marigold-flowered Fig-Marigold. The seed vessels of plants are very various in their forms in the different plants; see what Sir J. E. Smith says, in his "Introduction to Botany," page 211. The use of the seed vessel, among other purposes, is to protect the seeds till ripe, and then, in some way or other, to promote their dispersion, either scattering them by its elastic bursting, or serving for the food of animals, in whose dung the seeds vegetate. The same organ which remains closed, so long as it is juicy or moist, splits and flies asunder when dry, thus scattering the seeds in weather most favourable for their success. By an extraordinary provision of nature, however, in some annual species of *Mesembryanthemum*, natives of sandy deserts in Africa, the seed-vessel opens only in rainy weather, otherwise the seeds might in that country lie long exposed before they met with sufficient moisture to vegetate. The following may be interesting to many of our readers, and serve to throw some light upon the subject of our correspondent. In "Curtis's Botanical Mag.," Tab. 4,400, there is a figure of that curious plant called the *Rose of Jericho*, or the *Resurrection Plant*; and how many other names this plant may be called we cannot say. Its Linnæan name is *Anastatica hierochuntica*. Respecting this, the true *Rose of Jericho*, much ignorance prevails in our own country, and of late years, among us, the name has been incorrectly transferred to two very different plants (possessing similar hygro-metric properties) as widely differing from this as all are differing from any real *Rose*, and coming, too, from widely different countries; one is the *Lycopodium lepidophyllum*, from Western Mexico; the other, the capsules of certain South African species of Fig-Marigold of the Annual kind. The *Rose of Jericho* is just as much like a *Rose* as a *Cabbage* is like a *Pear*. It is a weedy, Orach-like plant when growing, but possesses that curious property of coiling itself up when dry, and unfolding when moistened.

CALENDAR FOR JULY.

FLOWER-GARDEN.

ANNUALS (Tender), bring out from frames; dress; give fresh earth; stake and tie. **ANNUALS**, sow for autumn; transplant generally. **AURICULAS** in pots, dress and water judiciously; seedlings transplant; old plants repot, c. Box edgings clip, b. **BUD ROSES**, **JASMINES**, &c. **BULBOUS ROOTS**, take up (see June); seeds sow. **CARNATIONS**, attend to (see June); shade and shelter during hot weather; water freely, and give liquid-manure. **CHRYSANTHEMUM** suckers separate and plant; layer. **CUTTINGS** of most herbaceous plants will root now, and of all the scarlet **Geraniums**, if planted on a south border, b. **DAHLIAS** require support and pruning. **EDGINGS**, clip. **EVERGREENS**, prune; seedlings, prick out. **FLOWER-BEDS**, stir surface often; train; stop and often regulate the plants, to get an uniform growth and bloom. **GRASS** mow and roll freely. **HEDGES**, clip. **HOE** and rake at every opportunity. **LAYERING** **Carnations**, &c., may be performed, b.; water freely; transplant rooted layers. **LEAVES**, decayed, remove as soon as seen. **LIQUID-MANURE**, give occasionally to flowering shrubs. **MIGNONETTE**, and a few other quick-flowering annuals, may be sown, b., for autumn. **PIPING** of **Pinks**, &c., may be still practised, b. **PELAGONIUMS**, cuttings, plant, b. **POLYANTHUSES**, seedlings, transplant; roots of old, part. **ROSES**, bud, layer, and make cutting of, b. **SEEDS**, gather as they ripen. **STAKE** and tie up the plants whenever necessary. **TRANSPLANT**, b., from the reserve garden in damp or dull weather. **WATER** freely, not only the roots, but over the foliage. D. BEATON.

GREENHOUSE.

AIR, admit freely night and day, unless when stormy; make an exception, however, in those cases where growth is still desirable. There shut up early, and use the syringe morning and evening. **BUD** and **GRAFT** **Oranges**, **Camellias**, **Azaleas**, **Climbers**, &c. **CINERARIAS**, cut down, plant out-of-doors, or keep in pot, according as you wish to grow from suckers, or merely by thinning-out, or dividing the old plants when growth has commenced. **CUTTINGS**, make and plant, placing them in cool pits at a distance from the glass, or in a mild bottom-heat, according to their requirements. Dress and keep everything neat. **CALCEOLARIAS**, give manured water; fumigate when necessary; cut down early blooming; thin the pods of those left for seed, as one pod will give hundreds of plants. Fine kinds done flowering, cut down and plant in light soil, on a north border; sow seeds of these and **Cinerarias** to have them early; for moderate early blooming in spring, it will be time enough a month hence. **GERANIUMS**, cut down the forwardest; tie and train successions; prepare for early supply of cuttings; they will do better now stuck in an open border, than two months hence in pits or frames. **HEATHS**, cut down and prune when done flowering; give plenty

of air to those in flower; shift those starting again after being pruned; and propagate by seeds and by cuttings in a pit under hand-glasses. Examine all PEAT PLANTS as respects water, for if dried up several times, death is next to certain; your only chance is to set the pot or tub in water until all is saturated, and then allow it to drain. All HARD-WOODED PLANTS must receive similar attention; the more sun they can stand now, the rougher and colder the treatment they will stand in winter. SEEDLINGS of all kinds prick off as soon as up, or they will be apt to fox off at the surface of the soil. SHADE when necessary, especially things not well rooted; it is better in bright weather than more air or delugings of waterings. SHIFTING must be attended to with all successions, such as Fuchsias, Geraniums, Balsams, Cock-combs, &c., and free-growing, quick-blooming plants, as *Achimenes patens* and *coccinea*. *Tropæolums*, and other twiners and climbers, must be trained and fastened daily. One of the prettiest ornaments for a window is the *Tropæolum pentaphyllum*; when done flowering, keep bulbs in dry earth until they vegetate. WATER must now be given with great judgment, especially to newly shifted plants that have been transferred from a small to a large pot. In general circumstances, there is now as much danger from want of water as in winter there was the danger of giving too much, and giving it when not required. All bulbs that have finished flowering and growing are an exception; as soon as the leaves get yellow they should be encouraged to get into a state of rest as soon as possible by withholding water. Those that have their leaves yet green should be assisted with water until the bulbs are mature. R. FISH.

FRUIT GARDEN.

APPLE ESPALIERS, train, thin, and stop. APRICOTS, pick off caterpillars, stop and train. CHERRIES, cleanse from fly and protect from birds. CUCUMBERS, thin and stop frequently, and reserve specimens for seed. CURRANTS (red and white), prune back all side spray and top. CURRANTS (black), water freely. FIGS, thin out the wood, and stop. GOOSE-BERRIES, exterminate the caterpillar; thin out where bushes are overloaded. INSECTS of all kinds exterminate. MELONS, train, stop, thin, set fruit, and water freely when swelling the fruit; also syringe on fine afternoons. NECTARINES, as Peaches. NUTS remove superfluous spray from the interior of the bushes, also suckers. PEARS, remove waste shoots, stop, &c., according to advice previously given; thin fruit if too thick. PEACHES, make a final thinning of both fruit and wood; stop gross shoots wherever found. PLUMS, beware of the fly; stop, and thin. RASPBERRIES, thin suckers, and stop when more than five feet high. STRAWBERRIES, keep down runners, and water late kinds. VINES, remove extra laterals from those ripe, and continue stopping late Grapes; water border, if dry and sound beneath, in dry weather.

R. ERRINGTON.

FLORISTS' FLOWERS.

AURICULAS and POLYANTHUSES, supply with water in dry weather; repot such as were not done in spring. CARNATIONS and PICOTEEES, shade from sun, and shelter from wind and rain; layer them as soon as the shoots are long enough. CINERARIAS, put in slips of as cuttings; transplant seedlings. CALCOLARIAS, treat similarly. CRYSANTHEMUMS, advance a stage by repotting. DAHLIAS, attend to tying; see the ties are not too tight; thin branches where too numerous; place traps to catch earwigs; look out for slugs, and if any are found water the ground with lime water; mulch freely, if not already done; and water abundantly in fine weather; put stakes to, if not done before. Cuttings put in of new and rare sorts; shelter the flowers when they open (See next month's Calendar). FUCHSIAS now in flower, supply liberally with water; repot such as require it. HOLLYHOCKS now advancing to flower, keep well tied to the stakes; mulch and water freely. HYACINTHS, take up, dry, and store. PANSIES, save seeds from; layer; protect from adverse weather; put in cuttings; seedlings transplant where they are to flower. PELARGONIUMS, specimens of, cut down; give no water till they give over bleeding; put in cuttings; pot off those that have struck. PINKS, cut off decaying blooms; layer, and pipe—it is not yet too late. RANUNCULUSES, take up, dry, and store, e. ROSES, cut off all decaying flower and flower-stems; destroy insects on, or the autumn bloom will be spoilt. TULIPS, take up, dry, and store, e. or b. WATER all florists' flowers in pots freely in dry weather. T. APFLEBY.

FORCING HOUSE.

BORDERS, attend to. BOTTOM-HEATS, minimum 80°, maximum 90°, CHERRIES, secure from sudden changes, may sink gradually to rest; use a little liquid-manure. CUCUMBERS, water and stop regularly; beware of insects. FLOORS, moisten twice a-day. FIRES, try to forget at present. FIGS, be sure the root is moistened; stop every shoot when four or five inches. GRAPES ripening, give abundance of air of a dry character; succession crops give air and moisture; thin, tie, train, stop, &c. INSECTS, continue to destroy. LIQUID-MANURE, apply where needed. MELONS, sustain the foliage for a second crop; proceed as before with very late ones. MOISTURE, Root, see well to; in air, should be well kept up, except with ripe fruit. NECTARINES, as Peaches; neglect will prove painful in the end. PEACHES, stop, train, and thin foliage, to colour fruit; late crops, apply liquid-manure. PINES, *fruiters*, use liquid-manure, clear; sustain a bottom-heat of 85°; shut up hot and moist. PINES, *successions*, frequently sprinkle; shift boldly when requisite, and air liberally, to keep them sturdy. VINES, young, train carefully, stop frequently, and apply liquid-manure, if moisture be needed. VENTILATION, forget not by day, and all night if possible; be not niggardly. WATERING, attend to constantly. R. ERRINGTON.

PLANT STOVE.

AIR, give most abundantly by day, and partially by night. AMARYLLIS BULBS that have done flowering, place in a cool house, to cause a state of rest, *Amaryllis* (*Hippeastrum*) *aulica*, pot, and plunge in heat.

ACHIMENES PICTA, put into wide, shallow pans, and start into growth. APHELANDRA AURANTIACA, pot and grow on, to flower in winter. BASKETS, any plant in, water freely, by dipping them in a cistern of well-aired water. BASKETS with drooping plants dip frequently. BE-GONIAS, to flower in winter, repot and grow on freely. EUPHORBIA JACQUINIFOLIA, ERANTHEMUM STRICTUM, and ERANTHEMUM PULCHELLUM, require liberal treatment now, to cause them to bloom well in winter. BULBS, done blooming, remove into a cool house, to induce rest. CLIMBERS, tie in, and keep clean from insects. CUTTINGS of various kinds of fast-rooting stove plants may be put in now successfully. CUTTINGS that are rooted, pot off, and shade for a few days. GLOXINIAS and GESNERAS done blooming, set out in the air in an open situation, to induce them to rest; lay the pots on one side to keep off heavy rain. GESNERA ZEBRINA, repot to bloom in winter. IXORAS, give the last potting for the season to such as are intended for specimens; tie down, to allow the young shoots to spring up in the centre; stop these, to cause bushiness. MOISTURE, supply to the internal air liberally. POINSETTIA PULCHERRIMA, pot and place in heat, to start into growth freely. PLANTS (young), remove as many as possible into cold frames early in the month; this gives them a stout, hardy habit, and helps to keep down insects, especially the red spider. POTTING may yet be done for all free-growing young plants. REST, give to all bulbous plants, and early flowering shrubby and herbaceous plants. SYRINGE, morning and evening, to keep down red spider, and to wash the dust off the leaves. WATER, apply in abundance to the freely-growing species, but withhold it from such as have made their annual growth. T. APFLEBY.

ORCHID HOUSE.

AIR may yet be given freely, and moisture in liberal supplies, by wetting the walls, walks, and pipes two or three times a day. BLOCKS, syringe daily, except such as may have ripened their pseudo-bulbs; remove such into a cooler and drier house. DENDROBES, continue to grow on for another month; water them abundantly. INSECTS breed fast during this month; apply the usual destroying remedy quickly and effectually. The white scale propagates the fastest of any of its class; wash the plants infested with it with a strong soap water worked into a lather, and laid on warm, but not hot. SYRINGE all the plants daily during the month, excepting it should prove cold and cloudy; let every part be kept neat and clean in every plant house. TOP-DRESSING; during this month go over all the plants, sponge the leaves and top-dress such as require it. WATER freely all growing plants, but as soon as the new pseudo-bulbs are fully formed, withhold water, and place the plants in a cool house. T. APFLEBY.

KITCHEN-GARDEN.

ALEXANDERS, earth up in dry weather. ARTICHOKEES, attend to. ASPARAGUS, discontinue cutting; keep clean from weeds. If salting has been attended to, none will appear; but earth-stir with some pointed instrument. BEETS, see that these are well thinned out; use the hoe freely. BROAD BEANS, save seeds from the best kinds; a small planting may be made of the *Early Mazagan* kind in an open south border, and well watered at the time of planting, should the weather be dry. BORAGE, sow, and thin out a foot apart. BORECOLES, plant out and prick out; in all cases, well water at the time of planting. BROCOLIS, treat the same. CABBAGES, plant out; sow seed about the 20th of the month, in an open situation; should the weather be dry, well water previously to sowing. CAPSICUMS, earth-stir among frequently. CARROTS, attend to earthing-up, &c. CARRAWAY, collect seed, &c. CARROTS, see that all are well thinned out, and use the hoe freely among them. CAULIFLOWERS, plant out; supply those that are forward in growth with plenty of water; invert a few leaves over the heads of those turning in. CELERY, plant out in earnest, and attend to earthing-up forward crops, and look after seed as it ripens. CHAMOMILE, keep clear from weeds, and collect flowers. CUCUMBERS, attend to daily, as to thinning, topping, training out, top-dressing and watering. The hand-glass-crops, fork up the earth round about their roots, allowing them sufficient room to run out freely. ENDIVE, of both sorts, make a good sowing towards the middle of this month, and plant out previously sown plants. GARLIC and SHALLOTS, take up and dry off for winter use. HERBS of any kind, cut and dry when in bloom. KIDNEY BEANS (dwarfs), at this late season, should be sown in open, warm borders. KNOTTED or SWEET MARJORAM, attend to earth-stirring. LEEKS, plant out, b. LETTUCES, sow or plant out, tie up in succession, and seed look after. MELONS, attend to earthing-up late planted out crops; do such work in the afternoon; shut up close; setting the fruit is best done about ten or eleven o'clock in the forenoon; give plenty of air to those ripening off their fruit; be sparing of the water among the ripening fruit. ONIONS, well thin out, weed, and earth-stir; press down stiff-necked Onions as they advance in growth. PARSNIPS, use hoe freely. PEAS, at this late season, sow early kinds in warm situations; well water at the time of sowing in dry weather; save seed from the best favourite kinds. In all kinds of PLANTING-OUT, take advantage of dull weather, and water well at the time of planting. Make good use of THE HOE in dry weather, in cutting down weeds, and earth-stirring. We never like to see the rake used much in the kitchen-garden. RADISHES, sow where required. SALSAFY and SCORZONERA, thin out, and hoe among, b. SAVOYS, plant out. SEEDS of all kinds look after, and collect as they ripen. SPINACH, sow in succession, and thin out. SWEET BASIL, earth-stir among. TURNIPS, sow in succession, and attend to thinning-out; use the hoe freely among them. Particularly attend to planting out this month; water, and use the hoe. VEGETABLE MARROWS, train out and thin out. T. WEAVER.

WEEKLY CALENDAR.

D M	D W	JULY 3—9, 1855.	WEATHER NEAR LONDON IN 1853.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in Inches.						
3	Tu	Acrydium sabulatum.	29.805—29.620	72—56	S.W.	02	50 a 3	18 a 8	11 6	19	3 46	184
4	W	Acrydium bipunctatum.	29.620—29.556	69—46	S.W.	01	51	17	11 21	20	3 57	185
5	Th	Lygæus apterus.	29.702—29.662	67—47	S.W.	06	51	17	11 37	21	4 8	186
6	F	Swallow-tail Butterfly.	29.725—29.695	67—41	S.W.	07	52	16	11 51	22	4 18	187
7	S	Green-veined White Butterfly.	29.743—29.722	66—51	S.	15	53	16	morn.	23	4 28	188
8	SUN	5 SUNDAY AFTER TRINITY.	29.750—29.721	72—45	E.	05	54	15	0 5	24	4 38	189
9	M	Sm. pearl-bor. Fritillary Butterfly.	29.773—29.723	72—49	W.	02	55	14	0 21	25	4 47	190

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 75.7°, and 52.3°, respectively. The greatest heat, 97°, occurred on the 5th, in 1852; and the lowest cold, 37°, on the 4th, in 1851. During the period 115 days were fine, and on 81 rain fell.

The next hardy British Fern, following in the alphabetical order, is

ALLOSO'RUS CRI'SPUS.



This has various local names, such as *Crisped* or *Curled Fern*, *Parsley Fern*, *Stone Brakes*, and *Mountain Parsley*. Names allusive to some one or other of its peculiarities. *Crisped* and *Curled* refer to the form of the leaflets; *Parsley*, to its resemblance to that plant; *Stone*, to its love of rocky or stony soil; and *Mountain* to its frequenting Alpine localities.

Its generic name is derived from the Greek *allos*, diverse, and *soros*, a heap, referring to the varying forms of the patches of its fructification, or *sori*. The

specific name, *crispus*, or curled, is explained by what we have said already relative to one of its English names.

A friend used to call this his “pet, pit, pot Fern,” and of a truth, it is not only most beautiful of form, but of that diminutive size which seems so needful to entitle anything animate or inanimate to the worthiness for being petted.

The main body of the *root* lies horizontally just beneath the surface of the soil, producing many fibrous rootlets. The *fronds* arise in May, or early in June; their *stalks* are from two to six inches long, slender, smooth, waved, and pale green. The leafleted portion is of a further length of from one-and-a-half to three inches. There are two kinds of fronds, one kind being barren and the other fertile. The *leaflets* of the *barren fronds* are altogether alternate, by which we intend that they are alternate on the branchlets, and the leaflets and their lobes are also alternate.

By “alternate” is meant, first on one side, and then one on the other side, each leaflet, leaflet, and lobe, being opposite to the space between two leaflets, leaflets, or lobes, on the contrary side. The leaflets of the barren fronds are pale bright green, wedge-shaped, finely-toothed on the edges, and frequently crisped or curled. The *fertile fronds* are considerably taller than the barren fronds, and their *leaflets* are spear-head-shaped, and smooth-edged. The fructification, or *sori*, are in lines along the under margin of the leaflets, as represented in the magnified leaflet of our engraving, but the margin is so rolled back as to conceal the sori, as on one side of the leaflet in that engraving. After the spores or seeds have ripened and been discharged—which in their native state occurs in September—the sori so spread out, that they cover the whole of the back of the leaflet, except its midrib.

In our engraving, which is of the natural size, the fertile frond is in the centre.

Allosorus crispus is a Fern rather rare in this country, being confined to its northern parts and mountains. It affects rocks, heathy places, and old walls. It has been found in Rutlandshire; at Tenterfell, near Kendal, in Westmoreland; on Cader Idris, in Merionethshire and on Snowdon, in Carnarvonshire; at Borrowdale, in Cumberland; and in the Highlands of Scotland.

It was unknown to old Gerarde and to his editor Johnson, nor do we find any mention of it as a native plant until 1696, when Ray, in the second edition of

his *Synopsis Methodica Stirpium Britannicarum*, describes it as found in Westmoreland, and other places, by Mr. James Sutherland, the first curator of the Edinburgh Botanical Garden. Ray calls it, as it was called by its first describer, Schwenkfeld, *Adiantum album crispum alpinum* (Curled Alpine White Maiden-hair). Linnæus, who knew less about Ferns than about any other of the great divisions of the vegetable kingdom, named it at one time *Osmunda*, and at another time *Pteris crispa*, whilst some botanists have called it *Cryptogramma*, and others *Phorolobus*, but the best authorities now agree that J. J. Bernhardt, at the commencement of the present century, was correct when he separated it from all other Ferns, and named it *Allosorus*.

We have seen that Ray and other early herbalists considered this Fern an *Adiantum*, or Maiden-hair. In those days plants were chiefly examined for their medicinal qualities, and all herbalists then agreed with our earliest writer on Plants, Dr. William Turner, that of the *Adiantums*, "the juyce stayeth the heare that falleth off, and if they be fallen off, it restoreth them agayne." But it is quite certain that his remedy is as defective as his spelling and grammar.

Though deficient in medicinal qualities, this Fern, as we have already noted, is well worthy of culture for its elegance.

When cultivated, it should be grown upon well-drained rockwork, moderately shaded, kept moist, and planted in a mixture of loam and peat, and all the better if a portion of bricks, broken up into small pieces, be mixed with it. But with all the care bestowed upon such plants, they will disappear at times, therefore, the cultivators of such beautiful and interesting plants should always keep duplicates in well-drained pots, and the pot-kept plants should always have winter protection, but during the summer months such pots can always be placed out-of-doors in some suitable place. The plants should always be well-established in pots before being turned out in the border or rockery.

This Fern is readily increased by division in the spring months. It grows luxuriantly in the greenhouse or vinery, under the shade of the Vines. A little protection can be given to any of these choice little Ferns, even when they are planted out upon the rockery, or in the border, by placing a hand-glass over them.

CONTINUING our notes, begun last week, upon the gardens well worthy of a visit in the vicinity of London, we may next particularize *Gunnersbury Park*, Ealing, the seat of Baron De Rothschild, one mile north of Brentford. It was distinguished for its good forcing establishment under Mr. Mills, the late head-gardener, and the honour is now upheld by his successor, Mr. Forsyth. About half-a-mile further on is *Ealing Park*, the seat of Mrs. Lawrence. It is scarcely necessary to inform the reader that the plants from this place attained a world-wide fame for many years at the Great Metropolitan Shows. It is gratifying to know

that it is still kept up in first-rate style under the management of Mr. May.

Another day could be profitably spent in visiting the *Royal Botanic Gardens*, Regent's Park. It is an excellent example, how a variety of landscape scenes, and the utmost seclusion, can be produced in a populous neighbourhood. This is owing to the skill of Mr. Marnock, the curator.

The "*Holme*," only a few yards from the back entrance to the Botanic Gardens, is situated in the Inner Circle, Regent's Park. It is a pretty villa residence, interesting for its tiny caverns, its rockery, and for containing *multum in parvo* of picturesque and artistical beauty.

The *Messrs. Henderson's Nurseries*, Wellington Road, St. John's Wood, and Pine-Apple Place, Edgware Road, are well worthy of a visit.

At *Mr. Veitch's Exotic Nursery*, King's Road, Chelsea, whither the visitor can be conveyed from Piccadilly by an omnibus, for sixpence, are to be seen many rare and beautiful plants, and the collections of well-grown specimens so distinguished and so conspicuous at the Metropolitan Flower Shows.

The *Nursery Grounds of Messrs. John Weeks and Co.*, King's Road, are in the same neighbourhood, and for tasteful arrangement with China vases, fancy baskets, and a German style of adornment, under the management of Mr. Granenberg, are worthy of a passing visit.

A cab will now be indispensable to convey the visitor to *West Hill, Wandsworth*, the seat of Sigismund Rucker, Esq. It is about two miles from Battersea Bridge, and contains a valuable selection of Exotic Orchids, and of New Holland and other sorts of plants, in the highest state of cultivation.

In conclusion, we can vouch, from pretty good experience, that gardeners are, generally, we may say universally, willing to show attention, and the gardens under their care, to all persons who take an interest in horticultural pursuits.

K.

BUSH FRUITS IN SUMMER.

ALTHOUGH a mere Gooseberry, Currant, or Raspberry bush is a small affair, taken singly, yet in the aggregate they are most important to the country, both in the kitchen and the dessert. We may say yet one word more for them, and that not a small recommendation. They are, as a whole, peculiarly the poor man's fruit. I will, therefore, cast a glance at each of them, feeling assured that most of the readers of THE COTTAGE GARDENER grow, at least, one or more of them.

GOOSEBERRIES.—Who ever heard such complaints of the ravages of the caterpillar? One market-gardener has been stated to have employed a hundred women in picking off these destructives. Our readers, perhaps, may be aware, that a nurseryman of the same standing advised, this spring, in the most emphatic way, the use of soot as a preventive of this caterpillar. I have used it somewhat extensively, and believe it to be a most useful application. Having applied it to about three-parts of the bushes here, and left the other portion undone, I am in a position to offer good evidence. I will not, however, say more at present, than that the dressed portion are almost free from this pest, whilst

on the undressed they have made considerable advances. But I took liberties with the original plan. I first syringed the bushes with soap-suds, and on the heels of this the bushes were smothered with dry soot. Like as in many other things, we should, doubtless, begin at the beginning, and there can be little doubt that this pest should be attacked in the winter, probably as soon as the leaves are shed.

But, passing by the caterpillars, let us see what other assistance the Gooseberry might receive before the extreme summer heats arrive. Mulching, then, is of much importance, especially on light soils. I have so high an idea of this practice, as subservient to a course of hardy fruit culture worthy of Britain, that I would advise all who possess a garden, and love high fruit culture, to provide a heap of material—a sort of apology for a midden or dunghill—every spring. I have done so this spring, and I had a bulk of material not to be despised, although composed, in the main, of half-rotten tree-leaves, old and half-decayed litter, &c., which had been used to protect things in winter, and no small portion the rotten remains of vegetables. To talk of mulching every year may carry an expensive sound into the ears of our friends, but they may just be reminded of the comparative inexpensiveness of the material; and I may here add, that, as has been said of vegetable matter, anything which has once vegetated and become a plant, is, when decomposing, qualified to become a kind of manure.

But this is not a mere question of manures; it is also one of moisture, and of its dissipation through heat. A coating of any sweet material in the month of May, after the soil has become warmed by the sun's rays, is of much benefit, both as to the present and future crops.

RASPBERRIES.—These, too, enjoy a little of the before-mentioned mulch, and one of the chief points of summer culture is to thin away any suckers which will not be wanted. A profusion of these not only shade the fruit too much, but rob the bearing wood. Some thinning-out of the blossom-shoots is occasionally necessary, where the plants are strong, and where a heavy complement of shoots has been left. Those who can afford time will do well to apply water liberally if drought occurs. Raspberries abhor drought, and even love a partial shade during summer.

BLACK CURRANTS.—Here, again, is a shrub which devours moisture greedily. I need scarcely observe, that mulching is of as much importance here as in the case of the Raspberries. Mine are in very high condition indeed, but they have a pile of mulch mostly composed of half-rotten grass, leaves, and rubbishy green stuff, in a fermentative state, piled over their roots, four inches thick; they luxuriate highly in this. Before I took to such practice, one-half the crop used to drop on the heels of the first swelling, and not unfrequently the other half were blistered by the ravages of the *Aphis ribes*, or Currant Fly, which ever attacks defenceless subjects. No fruit better repays a thorough watering than this, especially about the period of the fruit commencing its final swelling.

RED AND WHITE CURRANTS.—As I have often urged, in the pages of *THE COTTAGE GARDENER*, the gross and rampant breast-wood should be reduced at this period. I use the hedge-shears for this purpose; those, however, who have leisure, may use a knife, or the finger and thumb. I recommend the shoots being reduced to about five inches in length. I have found, by experience, that the fruit is seriously depreciated in size by too much sunlight. I have little doubt, however, that where flavour is the prime consideration, it would be well to reduce the spray to little more than two inches, just when the fruit is half coloured. It may here be observed, that the White Dutch Currant requires

little of this assistance; and frequently is best untouched, as it produces so much less spray.

GATHERING.—Whilst on the subject of bush fruit, it may be well to remark on the gathering of them. Where Gooseberries are attacked with the caterpillar, and a great portion of their foliage damaged, the best way is to gather every berry as soon as possible. We have practised such a gathering, and in addition, we once ran the hedge-shears lightly over the bushes, by which means they were induced to make a new growth speedily; in addition, some liquid-manure might be given them. In the general gathering of Gooseberries, it is good practice to thin them out; this allows the remaining portion to make very superior fruit. In the case of the dessert kinds, especially, this practice is to be recommended, as the flavour of the fruit left is thereby much enhanced.

We may just advert to *Strawberries*, although they do not come precisely in this class. Those who want to excel in culture by what is termed the young runner system, should immediately see to them. My practice is to prick the runners out, as it is termed, and to transplant them finally in the end of February; and to those on a small scale, at least, I can confidently recommend the practice, for the berries will assuredly be higher flavoured; the reason of which is, that the spring foliage is developed in a more moderate and substantial way through the slight check they receive in removal. I select a piece of hard ground which has been undug for months, manure it well with thoroughly rotten and well divided manure, and then fork it in only six inches in depth; the forking is performed twice, in order to mix it thoroughly. The runners are planted here nearly a foot apart, and the moment they are planted, a few tree branches are stuck amongst them to ward off extreme sunshine—the object being that they receive no check, for they cannot afford to lose a day. Watering, of course, is performed; and in a fortnight the boughs are removed, and through the summer all runners are cut away, and the crop kept clean. When severe frosts occur, a little long litter is strewed over them after they are frozen tolerably hard; and this remains on sometimes for weeks. This year, I planted such out at the end of the frost—a month, at least, later than usual, but my young plantation is at this time the best I ever possessed.

Those who want to produce good plants for succession work, in forcing cannot do better than practise this—potting their plants at the end of September.

R. ERRINGTON.

GRATTAN ON OLD TREES.—"He loved old trees, and used to say, 'Never cut down a tree for fashion-sake. The tree has its roots in the earth, which the fashion has not.' A favourite old tree stood near the house at Tinnehinch. A friend of Grattan's, thinking it obstructed the view, recommended to him to cut it down.—'Why so?' said Grattan.—'Because it stands in the way of the house?'—Grattan. 'You mistake, it is the house that stands in the way of it, and if either must come down, let it be the house.'"

HORTICULTURAL SOCIETY'S EXHIBITION,

CHISWICK, 20th JUNE.

THE June exhibition at Chiswick was above the average this season in Orchids, Pelargoniums, and the general growth, training, and respectability of all the plants, except, perhaps, one collection of very common-looking Pansies, at which most of us would have "jumped," four years ago.

The heavy, lumpish, ugly, unmanageable style of growing plants, for which Mrs. Lawrence's collections monopolized the prize, to the scandal of the Society, is now done away with altogether. Mr. Veitch, having obtained a good rooting over a firm subsoil, in London, is now a more powerful assistant to such spirited men of the trade, as the Messrs. Rollison, Fraser, and Henderson, to keep up good taste, and follow Nature more closely in the style of their plants; while Mr. Green and Mr. Ayres can now view the triumph of *their mode* in the hands of such young men as Mr. Dods; although it seems hard that a young Bantam should crow over a Dorking in his own yard.

The day was of the best kind for a show: not too hot to be unpleasant, and neither cool nor damp. The Duke of Northumberland was there early in the day, with a large party. He is the next greatest sailor after King William the Fourth; the next best gardener after Queen Victoria; and, with all, a most gallant tar, for you never see him on such occasions without lots of ladies about him, and there is not a blue-jacket afloat less distant than he. The Duchess of Sutherland had another large party there. Lord John Russell, too; but he never bothers himself with a party when he goes out only for the day; he looked much better, however, than he has for the last dozen years—the German waters agreed with him. The Bishops of London and Winchester, with other great gardeners in the Church, took advantage of the member's privilege, with a large proportion from the lay nobility. Having seen so many of these things, and for so many years, not forgetting the Crystal Palace Show, I cannot escape from the idea that the Regent's Park and the Crystal Palace will give one a good notion of the House of Commons—a place filled with the best people of the three kingdoms, as our Constitution has it; but if you want to see the dignity and solidity of the House of Lords, anywhere else, you must go to a May or June show at the Chiswick gardens; and yet, according to prophecy, both places have been "going to the dogs" ever since I knew them.

ROSES.

I began with the *Roses* this time, and found Mr. Lanes' collection at one end, on the north side, and that from Mr. Paul on the opposite side to it. Mr. Paul was never so near winning the first prize for *Roses*; which was the first

Gold Banksian Medal.—Mr. Lane won it for twelve kinds, as follows—*Madam Willermoz*, *Madame Plantier*, *Magna rosea*, *Celine*, *Chenedole*, *Emperor Probus*, *Blairii 2*, *Juno*, *Coup d'Ilebe*, *Barronne Prevost*, *Comtesse Mole*, *Miss Glegg*—placed very well for giving them the best effect, and as to flowers and growth, no *Roses* are deemed good now unless faultless in these respects.

Mr. Paul had the second Gold Banksian Medal for *Auguste Mie*, the best grown and bloomed plant at the exhibition; Mr. Paul spells it *Mee*; *La Dauphin*, *William Jesse*, *Paul Perras*, *La Ville de Brussels*, *Madam Legras*, *Brennus*, *Duke of Cambridge*, *La Marque*, *Louis Bonaparte*, *Souvenir d'un Ami*, and *Vivid*, one of his own raising, as good, at a distance, as the *Geant des Batailles*, but not a full *Rose*; it is, however, well suited for a pillar *Rose*—a hybrid *China*, or *Bourbon*, and therefore a summer *Rose* only.

Mr. Francis had the third prize, in the trade, but I have seen *Roses* come out much better than they were here. His twelve had among them the *Malmaison* *Rose*, *La Pactole*, *La Reine*, *Niphotos*, and *Auberon*; the rest as above. He had, also, a very interesting collection of dwarf *Roses* in 48-pots on the *Manetti*-stock, to show how they bloom with the first growth from the bud.

This is the sort of work for amateurs. Mr. Walton, of Surbiton, the inventor of the cutting case, is parti-

cularly clever at working *Roses*, and at blooming them early in pots; he, too, wants them all on their own roots, and is now striking them off by dozens with his new invention. I had a flower of *Devoniensis* sent me last May, from Mrs. Whitty, the lady who struck so many of them last year from one poor plant, the largest *Rose* I ever saw—the stalk was just like that of *La Reine*—hence, why I say so much about young *Roses* in pots as they are exhibited by Mr. Francis, and by Mr. Wilkinson, of Acton. We must get Mr. Lane to try this plan, and see if he can beat our Surbiton people. *Gloire de Dijon* was one of those small *Roses*, and much paler than when I described it from Regent Street last spring.

Among amateurs, A. Rowland, Esq., took the first prize at last—a Gold Banksian—all entered in his own name, too, like all his fine things. It must be recollected that Mr. Rowland is known, by name, all over the world; and it is only fair thus to let all the world know what he is about; but he puzzled a friend, by writing the plain English name, *Queen*, instead of *La Reine*, for that *Rose*: *Eliza Merceaur*, *Richlieu*, *Geant des Batailles*, and *Adam*, were among his best, and different from the above.

Mr. Terry, gardener to Lady Pullen, was second. He had *Great Western*, *Paul Ricaut*, *Smith's Noisette*, and *Jaques Lafitte*, different from the above. This is the first time that the celebrated Paris banker, *Jaques Lafitte*, appeared at a public show where I was, so I had a good look at him. He is very like some old summer *Rose*, very full and close, and puckered in the centre, with two or three guard petals, as it were, and a true Cabbage *Rose* colour. He ought to be very sweet.

The third prize was to Mr. Sage, gardener to W. R. Robinson, Esq., Hill House, Acton. He had different from the rest, *Mrs. Bosanquet*, *Devoniensis*, and *Eliza Sauvage*.

PELARGONIUMS.

Large *Pelargoniums* were better and more varied than usual; they were all in two rows, one above another; the placing of them, therefore, must be in two-and-two, and I shall tell them all in pairs, that all who know the kinds may see how the different growers place them for effect. Mr. Turner, of Slough, had the first prize for large and fancies.

His large ones were thus, in pairs, *Zeno* and *Topsy*, *Astrea* and *Portia*, *Beatrice* and *Governor General*, *Virgin Queen* and *Rowena*, *Mary* and *Painter Improved*, *Enchantress* and *Medora*.

Mr. Dobson had *Enchantress* and *Conqueror*, *Ambassador* and *Rosamond*, *Painter Improved* and *Eugenie*, *Magnificent* and *Delicatum*, *Magnet* and *Gertrude*, with *Star* and *Vulcan*.

The Messrs. Fraser had *Magnificent* and *Pretty Polly*, *Rowena* and *Bride of the Isles*, *Galatea*, and *Virgin Queen*, *Enchantress* and *Ajax*, *Majestica* and *Magnet*, *Vandyke* and *Lucy*. Mr. Gains had a fourth prize for *Star* and *Hyder Pacha*, *Andover* and *Virgin Queen*, *Butterfly* and *Magnet*, *Seraphim* and *Beauty of Notting-hill*, *Col. Fossy* and *Alonzo*, *Gustave Odier* and *Era*.

Among amateurs, Mr. Nye, gardener to E. Foster, Esq., had the first prize with *Attraction* and *Optimum*, *Iris* and *Ariel*, *Pandora* and *Magnet*, *Carlos* and *Purple Perfection*, *Phaeton* and *Rosa*, *Enchantress* and *Seraskier*.

Mr. Holder, gardener to the Rev. E. Coleridge, of Eaton, was second, with a gayer collection, as follows—*Mary* and *Mochana*, *Sanspareil* and *Topsy*, *Ariadne* and *Portia*, *Magnet* and *Carlos*, *Beatrice* and *Enchantress*, *Narcissus* and *Virgin Queen*. And Mr. Maher, gardener to J. M. Strachan, Esq., had the third prize for twelve. *Rosamond* was his centre-piece, *Pearl* and *Village Maid*, two light ones, were his two corners,

right and left; then, in pairs, were *Leonora* and *Painter Improved*, *Conspicuum* and *Narcissus*, *Centurion* and *Alderman*, *Spot* and *Star*.

In the amateur class for six PELARGONIUMS, Mr. Nye was first; and, for effect, this was the best placed in the range; the new one, *Fair Helen*, at the back, was in the centre; it is a fine thing, three-fourths white, after the manner of *Virgin Queen*, and *Purple Perfection* in front of it; then *Rosa* and *Optimum*, on one side, and *Phaeton* and *Enchantress* on the other side of the centre. *Purple Perfection* is a splendid flower, all dark at the back, except a narrow crimson fringe; the eye is lilac, and the front purple and streaked.

Mr. Robinson, gardener to J. Simpson, Esq., had the second prize for six. He also placed them for effect; in the centre he had *Magnet* in front and *Virgin Queen* at back, with *Rowena* and *Star* on each side of *Magnet*, and *Optimum* and *Alderman* on either side of the *Queen*. This disposition had a very good effect. One half of the beauty of flowers consists in a proper distribution of the plants, or colours.

FANCY PELARGONIUMS were in sixes, and Messrs. Turner, Fraser, Gains, and Dobson, ran in this order with the trade prizes. Mr. Turner had *Lady Hume Campbell* and *Charles Dickens*, as gay as their namesakes, in the centre, with *Conspicua* and *Criterion*, on one side, and *Cassandra* with *Perfection* on the other side. These were splendid plants; but it is very difficult to make a telling combination out of fancies, as they are either too much alike, as the gay ones, or not like the strain, as the dark ones.

Mr. Fraser had *Miss Sheppard*, a high-coloured *Caliban*, a dark for his centre, *Advancer* and *Reine de France* on one side, and *Celestial* and *Empress* on the other.

Mr. Gains had *Perfection* and *Conspicua* for a centre, *Vandyke* dark, and *Delicatum* the lightest on one side; *Lucy* and *Caractacus* on the other side.

Mr. Dobson had *Reine de Fleurs* and *Chammouni* for the centre; *Perfection* and *Criterion* on one side, and *Erubescens* and *Celestial* on the other.

Amateurs stood thus with their sixes: Mr. Weir, gardener to J. Hodgson, Esq., Hampstead; Mr. Windrow, gardener to A. Blythe, Esq., Hampstead; and Mr. Robinson, gardener to J. Simpson, Esq., Thames Bank, Pimlico; and also Thames Bank, Surbiton.

Mr. Weir stood thus:—*Hero of Surrey* and *Princess Alice* for centre; *Formosissimum* and *Funny* on this side; *Fairy Queen* and *Jenny Lind* on that.

Mr. Windsor did not balance his group; the kinds were *Fairy Queen*, *Bride*, *Madame Sontag*, *Lady Hume Campbell*, *Celestial*, and *Erubescens*.

Mr. Robinson had a good eye for effect, for he put *Delicatum*, the lightest, and *Richard Cobden*, dark, for a centre, in strong contrast; *Celestial* and *Fairy Queen* on one side, with *Conspicua* and *Amelia* on the other.

Mr. Turner showed a group of *Queen of Roses*, a new fancy seedling, in small pots, packed as close together as they could stand, that their heads might show as one plant. Verily, Mr. Turner knows the value of "effect." Mr. Dennis had a lot of his *Alma* there; and Mr. Bullen, of Dulwich, had one plant, called *Sir E. Lyons*, which is of the same breed as the *Alma*, very much like it, but with more purple; and Mr. Gains had a lot of his *Scarlet Unique*, a good bedder, but of the true *Ignescens* breed.

This ends the best lot of Geraniums I ever saw, or booked. But, no; there was a white-scarlet and a flesh-coloured, both Horse-shoe, from Mr. Wheeler, florist, Hendon. The former is after *Boul de Nieve*, and the other after *Skeltonii*; both are said to be from my *Shrubland Cream* and *Tricolor*; if that be true, there is not the slightest use in following that strain. The only two which I selected, out of six or seven hundred, are *Shrubland Cream* and *Tricolor*, the best two pot plants yet

of the strain, and none of them are fit for "planting-out."

No; you must all stick to Sweet's *Zonale album*, before you can ever hope to make a good bed of white-scarlet Geraniums. I am in the fourth generation, rising into the fifth, and had eighty-five flowers on a truss; but what are they? Why, not fit to present to Uncle Tom for his cabin window.

MISCELLANEOUS.

I see I cannot finish off my saying without lumping too much together this week, so I shall slip over the Orchids, the large, and not large, collections, and the dessert, and turn to the odds and ends. The best new plant of the day was a most lovely *Tree Phlox*, or *Leptosiphon*, from California, sent by Mr. Lobb to the Messrs. Veitch, who had it here as a specimen plant; and a lot of young ones of it from cuttings in bloom, to show how free it is. The growth of the "tree" is remarkable, not bigger than a *Tree Violet*; little round leaves, well clothed, good habit, and a bedding-out plant, at least, let us hope so, for I saw one of our highest Peeresses bending over it, and asking it audibly, "Will you make a bed?" The flowers are more after the style of a *Leptosiphon* than that of a *Phlox*; the size and shape much after *Linum flavum*, and the colour a delicate light lilac. The name given to it was *Leptodactylon Californicum*; but that name will not do—that name has been cancelled long since for *Leptosiphon*.

Seeing this, I spent a day after it. I got the benefit of a "walking encyclopedia," and after that, a good rummage among old books; the result is curious. The plant was in bloom in the same garden of Chiswick twenty-eight years ago next August! and there was a dry specimen of a pure white variety of it placed in Mr. Lambert's Herbarium, in London, forty-four years since; and a specimen of *Clarkia pulchella*, by the same hand, at the same time, 1811;—although Douglass was then at school. But the story is too long for one week;—suffice it to say, that Dr. Benjamin Barton, of Philadelphia, out of his private purse, paid the expenses of the journey of the collector who first discovered this plant in 1808 or 1809. The same collector described the white variety of it very well indeed, and called it *Phlox speciosum*; but whether it will be a *Phlox* or a *Leptosiphon*, we must wait to see. But no lady should wait longer for the plant, now that we have it sure, than the day it is let out by Mr. Veitch.

The next best plant of this class was the so-called *Linum grandiflorum*, well-bloomed at last, by the Messrs. Henderson, of Pine-Apple Place. We were all stretching our necks after this gem for the last eighteen months; everybody had seeds of it in 1851; but none could do any good with it. The flower of this *Linum* is exceedingly rich and gay. It is not just a crimson, but next thing to it, with a darker eye; the word *atrosanguinea* gives the best expression of the colour.

Next, a new dwarf species of *Hydrangea* from Japan, by Mr. Veitch, which is after *H. Japonica*, but different, and with the front bract much larger than the rest, and fringed. A fine rose-coloured hybrid *Rhododendron*, named *Princess Royal*; it is a cross between *Jasminiflorum* and *Javanicum*; the habit takes more after *Javanicum* in all the parts. It was praised by every lady's lips; but I could not hear if it is on sale. It is the produce and property of Mr. Veitch, who had also the largest red *Gloxinia*, called *Grand Sultan*, a purple-leaved *Begonia* from Peru; for the class of "fine-leaved plants;" and *Anactochilus Veitchii*, for the variegated class. The leaf is large, dark purplish-green, with veins of a lighter green. Mr. Veitch also had the *Aralia papyrifera*, with leaves more fit for the Crystal Palace than any house I know; and a large-leaved *Rhododendron*, from Borneo, related to *Brookianum*, not yet flowered, which he thought was that kind, and he is

not sure of the difference yet. *Scheeria Mexicana*, and a seedling *Heath*, called *Spencerianum*, with rosy flowers and an excellent habit, were shown by Mr. Glending.

The Messrs. Rollison showed a *Begonia splendida*, clothed with crimson hairs; a new *Cypripedium*, and a new *Dendrobium* after *secundum*; and Mr. Henderson sent a beautiful-leaved *Gordonia*, from China. Then there were several of those straightforward-looking *Gloxinias*, which turn up the flowers to be looked at, from Tooting and Pine-Apple Place; but I must see them again before I decide on their merits. They are certainly very pretty, but not so new as this season, as I see lots of them at Mr. Jackson's, of Kingston, which he had from the continent last year in large plants. Mr. Ingram had an improvement on *Achimenes picta*—one with a crimson back to it—a cross, no doubt. A *Petunia*, after my *Shrubland Rose*, from Mr. Westwood, of Acton. If it beds well, it will put my credit in that strain on the shelf for ever; and I hope it will have as large a circulation; and that, when all his customers are well served, he will send me a plant of it for nothing, and pay the carriage, too, to my very door. It would only be paying me a compliment as being the great advocate for that strain with which I pushed the florist's *Petunias* out of date, and never ceased till I enlisted the first ranks in science to my view of a good *Petunia*.

D. BEATON.

PHOTOGRAPHIC PORTRAITS OF FERNS.—Among other objects of interest shown at the conversazione of the Royal Society, last week, were a series of photographic copies of the magnetic registers at the Royal Observatory. These were of special interest in a double point of view, both as copies of photographs produced by artificial light, and as copies of records far too important in their bearing upon magnetic inquiry to risk the casualties of an engraver's office, and too nice in their details to be of value unless impressed as fac-similies. The perfection to which these copies have been brought by Mr. Glaisher leaves little to be desired, many of them, even, being more vivid than the originals, the multiplication of which promises to be of scarcely less importance than the first application of photography to the registration of the magnets, which until then had been recorded by the usual method of observation, and was necessarily wanting to the continuity secured by Mr. Brooke's method by the application of photography. By a modification of the same process there were exhibited a collection of British Ferns, by Mrs. Glaisher, from specimens selected by Mr. Newman. These beautiful copies, the size of life, and perfect in all their details, promise to be of value to the botanist, to whose requirements they are better adapted than any that have yet been placed at his command. Their effect is that of delicate sepia drawings, and at the same time that the venation of the leaves is displayed with the fidelity and delicacy of the original, it is, as in Nature, only to be detected on near inspection. Our acquaintance with the natural history of the Ferns, and their peculiar elegance of form, is likely to be much increased by this valuable and interesting series, which, we understand, is in course of publication by Mr. Newman. The same process likewise supplied numerous copies of snow crystals, as observed by Mr. Glaisher, and drawn and photographed by Mrs. Glaisher. The application of photography in this, one of its most elementary but important branches, promises to be an important feature in aid of philosophical inquiry, and is well worthy of considerable extension in its applications.—*Athenæum*.

A GOSSIP ABOUT PITS.

(Continued from page 218.)

HEATING PITS.

"I have a Melon and Cucumber pit, with seven lights, length, twenty-six feet four inches; breadth, six feet eight inches; depth in front, three feet six inches; at back, four feet six inches—built of rough stone, with wooden divisions. It has hitherto been worked with stable manure and tan; but we find much difficulty, in making a new bed in any of the compartments, in preventing the plants in the others from being burnt. Do you recommend a flue carried round—brick or iron? If so, at what depth from the foundations? Any hints will oblige, &c."

I presume that this pit is heated by tan inside and by dung linings outside. If early growth is attempted, the temperature would be more dependent on the linings outside than upon the tan within. Allowing for soil and growing space, the tan will be about thirty inches deep at back and twenty inches in front. To maintain a genial temperature in that for a long time, and at an early period, the linings would have to be strong, and the heat would be more equally diffused to the tan if a small flue ran from back to front under each, or every second light; or, failing that, a rough flue, made of bricks and clinkers, and left as open as possible. I have grown Melons and Cucumbers in such a pit, without any fermenting material inside at all; and with close walls, four-and-a-half inches wide, and strengthened with piers of nine inches. The pit inside was filled nearly to half its depth with clinkers, brickbats, &c., as open as they could be packed; on this rough gravel was laid, and on that the soil. There were no pigeon-holes in the wall, because the manure was to be used as brought from the stable, and, therefore, *unwholesome* steam, &c., was to be avoided. There being manure to any extent, there was no want of heat unless when the weather was so extra severe as to arrest the fermenting processes, which was generally taken care of by covering the linings proper with immense mounds of litter.

For a pit to be commenced in February or March, I do not see why such a pit should not answer well. The burning referred to, I look upon as merely the result of an imperfect division, or using the material inside in a state the reverse of sweet. Even though the tan or the dung used be what is technically called sweet, that is, free from noxious gases, yet the steam proceeding from such a body when shaking it up, so as to form a bed, would be apt to scorch the leaves of such tender plants as Cucumbers and Melons. There is no doubt that the wooden divisions are not close enough, and whilst they remain, all openings should be closed with moss or clay while a new bed is forming. Unless used when excessively hot, the depth of fermenting matters inside could hardly burn the roots of plants with a wooden division all through; but if danger be apprehended from this source, it will be advisable to work the tan or the dung well before using it.

I recollect finding such a pit extremely useful—it was divided into three divisions of three lights each, by brick divisions of the width of a brick—four-and-a-half inches. The centre was begun rather early, and then the two end beds acted as linings to the central one, before they were used for planting out. It seems probable that a more substantial division, or a better preparation of the fermenting material used inside, would obviate all the difficulty. Where there is plenty of fermenting matter, the chief expense of managing such a pit consists in the labour, as the manure just gets prepared for the kitchen and flower gardens. I also feel a doubt in recommending hot-water in lieu of dung—on the mere

question of expense alone—where fuel is at all difficult of access, as, whatever may be said of the effectiveness of that or this apparatus, and the wondrously small quantity of fuel it consumes to raise water to such and such a temperature, I am certain that the gentleman who thoroughly believes all this, will have some reason to shrug his shoulders at the expense for fuel alone, if he wishes for Cucumbers in January and Melons at the end of April. Where pipes and flues are used merely as auxiliaries it is quite a different affair.

I understand our correspondent to refer to a flue to be heated by a furnace. If he means a dung-flue, it will be more proper, as already adverted to, to take it across the bed instead of along underneath it. Supposing that he contemplates a fire-flue, he will find it a useful auxiliary; and if so, a double course, a going and returning, so as to have the chimney at the same end as the furnace, would be preferable to going once through. For this purpose, I should prefer a small nine-inch flue, or even less, to an iron pipe, as the latter is so apt to be clogged soon with soot, to which it clings so tenaciously, as before long to become impassable, unless great care is taken. I would place that double flue, or single flue, in the centre of the pit; would build it on the bottom that now exists, or rather two or three inches above it; would then concrete the bottom of the pit with strong lime and sharp sand, that it might retain water moderately well when desirable. On each side of the flue, close to the side walls, but not at all touching the flue, I would place a layer of rough stones, &c. From nine inches to a foot above the flue I would have an open platform of boards, the spaces between filled with clinkers; on this platform the soil would be placed, or, if there was room, the soil would go on the top of a foot or more of tan. At the back and the front of this platform there would be box-openings, rising higher than the soil, to be opened at pleasure, for allowing heat from the chamber into the atmosphere of the pit, and also for pouring water down among the stones so as to produce moist heat. A piece of sponge tied to the end of a stick, and rested on the concreted bottom, would always afford a pretty fair index as to the moisture in the chamber; and as long as there is moisture in the chamber the heat of the flue will raise and disperse it in the shape of vapour. Such a flue will be a great assistance in bad weather, or where the fermenting material could not be depended upon in sufficient quantity, and the construction of the pit would be such, that it need only be worked when there was absolute occasion. I have had such pits, long ago, under my charge, and with the exception of being a little more liable to accidents, and the heat not so equally diffused, I consider them little inferior, if a great space is not to be heated, to such pits heated top and bottom with pipes, as were described in a previous volume.

ECONOMISING SPACE.

“What do you think of the following? I propose erecting a pit to grow Melons in summer and autumn, and preserve my stock of bedding plants in winter. It will be heated by a flue, which will traverse by the back and front wall. As I have plenty of stable-dung, I think I can dispense with the flue in summer, by leaving a projection in the brick-work, a few inches above the flue, and on these projections resting slabs of wood for sustaining the bed. When the crop was over, and the earth, &c., removed, I propose raising the slabs to other projections, two feet from the glass, and on this platform standing the plants, and only use the flue to exclude frost and damp.” There is a portion in the previous answer that will just suit your case. The principal ideas in your communication—the leaving projections in the brick-work, when building the wall, so as to admit of a platform being easily placed at different heights; and the

having a flue running in the wall, instead of beside it, in certain circumstances,—I must of necessity approve, as both schemes have been recommended by me in this work. The leaving of a row of bricks projecting for an inch or so, is of great utility when the pit is to be used for different sized plants standing upon a platform; and these projections need never come in the way of anything. The only objection to the flue traversing the wall is the loss of heat that escapes on the outside. I mentioned, sometime ago, how that loss could be greatly obviated if the flue was shut in on the outside, leaving an open space against it, and a few openings from that space into the atmosphere of the house. The economy of the idea is enclosing the flue in the wall, which must of necessity be built, and thus escaping a separate flue building. For the purpose mentioned, the plan will answer very well. Where Melons were to be dependent *solely* on the heat of the flue, I would recommend the flues to be separate. I would also advise that the projections for the platform be at least six inches above the flue. This will leave room for heading the flue properly, and place the boards at a safe distance from the heating medium. When used for Melons, part of the space below the platform may be filled with sweet fermenting matter, if desirable. If the chamber is left open, strong linings will be necessary. The flue would be very useful in enabling the giving of more air to the Melons in dull, cold weather. It is especially well placed in the walls for dispersing damp in winter, as the walls above the flue can hardly remain damp.

HOT-WATER DOES NOT DISPENSE WITH MANURE.

“For the sake of neatness and economy combined, I did away with the dung linings, and had hot-water apparatus; and now, independently of a smart bill for forcing, and a contemplated one for artificial manures, or well-decomposed dung, without one of which I am told I may bid farewell to succulent vegetables, I am doubtful if these new improvements are all a clear gain. My gardener says there are no two sides to the question. I must again give him stable-dung, as before, to be decomposed as linings, or by other means, or manures must be brought to keep things going on right.”

I am no fair judge on this question. Of course, I would naturally “stick to my order.” There is nothing but sound sense in the gardener's proposition. Hot-water is a fine thing, but the finest and strongest horse may be ridden over-much. I have known rejoicings over hot-water followed by woe-begone complaining, that nothing could be got to give a fair start to Celery, and make it at once large, sweet, and crisp. And so with other matters. Heat how you like; be assured that the absence of manure dressings from the kitchen-garden will give you puny, hard, and stringy vegetables.

R. FISH.

SUPPLY OF GUANO.—Consular despatches, communicated to the Board of Trade since the 1st of January last, respecting additional sources of the supply of guano were lately published. It hence appears that deposits of guano have been discovered in the islands composing the canton of San Andrés, in the province of Carthagena; in the islands belonging to the Ecuador, off the coast of the province of Manabi; in an islet called “Hergest's Rocks,” situated near the island of Nukahiva, in the Marquesas group; on the east end of the island of Guadaloupe; on St. Mark's Island; in the proximity of the Bay of St. Bartholomew, on a small rock near the south-west end of the island of Navidad; and on Maria Island. It is also probable that considerable deposits of guano exist along that unfrequented portion of Peru,

extending from the Chincha Islands in 13.40 to 15.50 south latitude, from the river Pisco to the river Acari, a distance of 200 miles in a south-eastern direction, over a sandy desert. The extraction of guano from the islands in the canton of San Andrés has been prohibited by the Governor of Carthagena.

WOODS AND FORESTS.

(Continued from page 54.)

THE SCOTCH PINE (*PINUS SYLVESTRIS*).

WE have high authority for contending that it is necessary to give "line upon line, and precept upon precept," in order to impress upon the minds of men the beauty and usefulness of any practice tending to advance any art or science. If any one art or science need to be constantly pressed upon the members of a community, it is the art of Arboriculture, whether for profit or ornament; and why? Because the planter (or owner, more properly speaking) will most probably not live long enough to reap the reward of his outlay. He must, in most cases, expect that his children or heirs will enjoy the fruits of his labours. Yet, as I have repeatedly shown, the owner of young plantations formed by himself will have a great enjoyment in watching their progress, in attending to their well-doing, and, above all, in being conscious that his estate is improved, increased in value for his successors, and his country generally benefited by his patriotic efforts to clothe the waste places of the earth, making the "wilderness to smile."

Many men have, no doubt, with some effect, devoted their powers, from time to time, to spread abroad the spirit of planting, and stir up the owners of large tracts of country to improve them, and convert them into woods and forests, so as not only to give a warmer and more picturesque appearance to such wild, barren districts, but also to increase thereby the general resources of the Empire.

I endeavoured to show, in my last paper, at the page referred to, how the barren, black, sandy wastes, at present growing nothing but Furze, Ferns, Heaths, or other wild, almost useless, shrubs, might be clothed with valuable timber; especially the Scotch Pine. I mentioned that there are some varieties more valuable as timber than others; also, the soil and situations in which this valuable tree arrives at the highest perfection; and some other matters connected with it, which I need not recapitulate here. It now remains only for me to give a few brief directions on—1st, Propagating; 2nd, Planting; 3rd, Thinning and Pruning; and, 4th, Felling for use.

1ST. PROPAGATING.—Whoever thinks of raising his own seedling Scotch Pines should write to some seedsman in Scotland to send him seeds selected from the best variety—that which Mr. Sang calls the *P. Sylvestris montana*. The best time to procure the seed is during any of the winter months. In the meantime, the ground to sow it in should be duly prepared. A light, sandy soil, clear of perennial weeds, is the best for the purpose. The site should be rather elevated, because, though this tree is so hardy, yet the seedlings may be cut off by the late spring frosts, which are always most destructive in low-lying grounds. The land should be laid up in ridges in the autumn, to be acted upon and pulverized by the winter frosts. About the middle of March, in moderately dry weather, level down the ridges with a fork, breaking any lumps there may be in it, and digging it perfectly level. Let it remain so for a week for two, to dry the surface and become kind to work.

Then, a few hours after a shower of rain, when the soil is in a friable, well-pulverised condition, proceed to set out the seed-beds three feet wide, with fifteen inch alleys or walks between them. Stretch a line on each side of a bed, and with a rake draw off about an inch of the soil into the alleys, drawing off half on one side and half on the other. This is called by nurserymen the bedding-in system. Sow the seed immediately, so thin that each plant will have an inch square to grow in. The Scotch Pine requires more room than the Larch in this stage, because it should stand two years in the seed-bed previously to transplanting. Cover the seed with soil from the alleys, half-an-inch deep, by the help of a clean, bright spade. This part of the operation requires a practiced hand to do it evenly, neatly, and quickly. When all is sown and covered up, rake the beds over very lightly, so as not to disturb the seeds, and finish off by stretching the line on the sides of each bed an inch-and-a-half from the line of seeds; chop down the sides with the spade, and rake the alleys smooth to put out every footmark. The plot is ready then for the warm showers of spring to moisten the soil and cause the seeds to germinate. Should no rain fall, and the ground becomes dry, it is absolutely necessary to resort to the watering-pot. One with a fine rose must be used, and the evening is the best time for the work. Enough should be given to wet the ground thoroughly; but it should be laid on so gently as not to flood the earth. If convenient, it would be advantageous to cover the seed-beds with garden-mats, to prevent a too-great evaporation, and the sun from drying the surface too quickly. This covering to be removed as soon as the plants appear above the soil. If dropping weather ensues, they will require no further care, excepting diligent weeding. Weeds should never be allowed to advance above the seed leaf; they are very troublesome to pull up when larger, and besides that, the weeder is apt to draw up some trees with large weeds.

TRANSPLANTING.—The best time for this important operation are the early spring months. The last week in February, the whole of March, and the first week in April, a space of six weeks, is the very best time of the year for transplanting young Fir seedlings. If planted in the autumn, and a hard frost takes place the following winter, those small-rooted plants will, when the frost is gone, be found standing loose above the surface. As the saying is, "the frost has thrown them out," therefore it is better to transplant in spring as soon as the frost has gone out of the ground, and the surface becomes dry enough to work it. There are three things to attend to in transplanting seedlings, or, indeed, in transplanting larger trees. The first is the preparation of the soil where the trees are to grow; the second, the taking up the plants; and the third, the inserting them in the soil made ready for them.

The first of these, preparing the soil, is simple enough. It means digging, mixing, and pulverizing; and the best season for this work is the latter end of the summer for the first digging, with a forking over in dry weather, after the new year has set in. The second operation, taking up the plants, should be so done as to preserve the roots as entire as possible, and no more should be taken up at once than can be planted the same day. The third part of the operation, the inserting the plants, is done in various ways. For the Scotch Pine, I prefer the one named trench planting. Whoever has seen box-edging planted will have a good idea of this mode. It may be described in a very few words. Open across the piece of ground a trench, the soil from it may either be spread on the surface, or, what is better, wheeled to the other end of the piece to fill up the last trench, then make the side of the trench the furthest from the operator upright, using a line to keep it straight. Set against it a row of seedlings, six inches apart, and a trifle deeper;

then cover the roots with fine soil, and tread it firmly to them. Dig on till the space is wide enough for the next row. I think, in a gentleman's nursery, half-a-yard might be allowed with advantage; but in sale nurseries they seldom allow more than nine inches from row to row. As soon as the space is dug and levelled, shift the line, chop down the soil, and so proceed till all the trees are transplanted. This method is much superior to the old-fashioned dibble planting, because, by the spade method the roots are not cramped as they necessarily are when thrust into a small hole made with a dibble.

T. APPLEBY.

(To be continued.)

THE GOOSEBERRY CATERPILLAR. — In page 183, it appears that Mr. Norris, of Isleworth, is obliged to employ several women to collect the caterpillars from his *Gooseberry* plants. For two or three seasons past, I have been in the practice of *painting* my plants from the ground up to the lowest buds with common train-oil, and have escaped all caterpillars.—J. R., Clapham.

CULTURE OF DAPHNE ODORA, DAPHNE ODORA RUBRA, AND DAPHNE ODORA VARIEGATA.

A SHORT time since, a Correspondent inquired about the treatment of *Daphne odora*, and was referred to a previous notice; and now, a Correspondent inquires about *D. odora rubra* and *D. odora variegata*—their flowering—the desirable mode of managing them—system of propagation—informing us that a short paper would be a boon to the amateur gardener.

There can be no question, that among many sweet things these occupy no inconspicuous place, attracting rather by the lavish diffusion of their perfume, than anything very striking in their appearance. In the parlour window, in spring, and on the stage of the greenhouse, they are ever welcome visitors. In modest worth they may rank with the lowly Violet; and both are sweet reminders of that retiring philanthropy that does good by stealth, and would blush to find it noticed or praised.

PROPAGATION.—The *Odora* is freely propagated by cuttings. These succeed best when taken off in April or May. They are best procured at that time, as the plant may receive what little pruning it wants immediately after it has done flowering. Young shoots, about two inches in length, cut across just where the younger and the older growth meet, so as just to have the base of the cutting hardish, instead of soft and spongy, strike the most readily. Little pieces of this description may often be met with in a largish plant, growing from the sides of the large branches, and these should be slipped off with a heel, as it is technically called, which just furnishes the necessary proportion of firmish wood for the very base of the cutting. Young, vigorous plants are apt to throw up some large, succulent shoots; and though, for want of a better, I have frequently struck these, yet, as a rule, they should be avoided if better are to be obtained. Cuttings, such as those first alluded to, being cut clean across at the base, and two or three of the lower leaves neatly removed, should be firmly inserted in silver sand over sandy peat and loam, in a well-drained pot, be well watered, and when dry have a bell-glass put over them. The cuttings may then stand shaded from direct sun at first in the closest part of a greenhouse, but will succeed better if the pot should be plunged in a sweet bottom-heat of from 70° to 75°. The chief attentions the cuttings will require are, shading from bright sunshine, but removing the shade as early in

the afternoon as it can be done without, so that the cuttings may not be feebly elongated; as much water as they will require to keep them from flagging, in unison with due shading; and as much air, especially in an evening, by tilting the bell-glass a little, as will prevent the leaves damping or getting unhealthy. As the roots form, more air should be given by degrees, until the glass is wholly discontinued, first, during the night, and ultimately, also during the day. Then the pots, if plunged, should be lifted out of their plunging medium, and in a few days potted separately in three-inch pots, and kept closish and moist in a pit or frame, until growth is progressing freely, when air may be freely given them, increasing the quantity by degrees.

I have struck *odora rubra* in the same way, and though I have never tried *variegata*, I have no doubt it also could be so managed. Both of these, however, as well as *odora*, will make plants sooner by being budded or grafted on the Spurge Laurel, *Daphne laureola*, or the *Daphne Mezereum*, &c. As the *rubra* and *variegata* strike much less quickly and surely than the *odora*, and as the bits of them, in the shape of buds on young shoots, are much more valuable, in a commercial point of view, it is general to obtain them, when ordered, as grafted or budded plants; and it must also be owned that they do better, grow more vigorously, and bloom more profusely, than on their own roots.

Two things seem necessary to present and ultimate success with these budded or grafted plants. I say budded or grafted, for that mode which is generally adopted may be called bud-grafting—a very small bit, with a bud or two, being inserted in the side of the stock. The first requisite is, that the stock should be young and healthy, from one to two years old from the seed, and duly established in a pot, so that there may be vigorous root action to start and support the scion or bud at once. The second necessary, is performing the operation in spring, or autumn, either before the buds have pushed, or after they have been fully formed and in comparative repose. And a third requisite may be mentioned in the shape of an auxiliary, namely, placing the plants when thus grafted into a close, moist frame, or pit, with a rise of temperature sufficient to hasten the junction and swell and expand the buds.

Some time ago, I mentioned how successful they were with *odora rubra* at Bedford Nursery, Hamsstead Road. Mr. Wood supplies great quantities, annually, to the trade. In calling there, the other day, I saw great numbers in open frames, budded and grafted the previous autumn and spring. Most of them were in three and four-inch pots. The union was effected within an inch or two of the soil; and though the plants averaged only from four to six inches in height, each of them, from being stopped, had from three to four and six strong, stubby shoots. These, if allowed to grow on during the summer, would bloom the next spring; and would like more pot-room being immediately given. Mr. Wood stated, however, that if a fine specimen was desirable in a short time, he would nip out the points of each shoot, and sacrifice a year, or even of two years bloom, to obtain a fine bushy specimen. On inquiring where their larger plants were, I was informed that it was impossible to keep them; a plain proof of the general favour in which such plants are held; and an evidence that, even in these trying times, when a double income tax is but a trifle to the harrowing sensations that news from the Crimea bring to many a heart and many a home, the love of the sweet-scented and the beautiful in flowers remains as indestructible and permanent as ever, because associated with our best sympathies, and proving even an auxiliary solace amid the darkest hours of sorrow and bereavement.

SOIL.—This should be a mixture of loam and heath

soil; the former preponderating, especially after the first potting.

TIME OF POTTING.—For young plants this may be done twice during the summer, when the object is to encourage growth. When an established plant has finished blooming, and is cleaned and allowed to remain in a cool greenhouse for a week or so after being pruned,—which will chiefly consist in cutting or stopping some over-strong growing shoots—the plants then will like being treated for a month or two like an Azalea, or a Camellia, in a closish, moist atmosphere, to encourage the making of fresh growth; and when that growth is proceeding freely will be the best period to repot, provided it is early enough to have the fresh pot well supplied with roots before winter, and to give you an opportunity to keep growing the plant for a short time afterwards, and then ripening the shoots by full exposure to sunlight before winter. The youngness of the plants belonging to our correspondent, as they are so healthy,—as they bloom best after being grown a couple of years;—the stopping of the shoots too late in summer, as what pruning or stopping is required, should be done as early in May as is convenient;—the potting too late in autumn; or, what is as likely as anything, not giving the plants sufficient light and sunshine in autumn;—each, or any of these may be the cause why the plants have refused to bloom.

PRUNING AND WATERING.—The first of these has been sufficiently referred to. All pruning or stopping after May will yield you growth, but the shoots produced will not be sufficiently matured to produce bloom in winter and spring. The plant requires plenty of water when growing, and less when in a state of comparative rest in winter. The temperature will greatly regulate the amount of water. After pruning, and when making its growth, the syringe may be freely used among the shoots in all sunny days during the morning and evening, and a little shade will be necessary if the sun is powerful. A little cool manure-water in a weak state will be useful in autumn.

TEMPERATURE AND POSITION.—Unless in winters like the last, these plants would stand out with a little protection during the winter in the south of the Island. As a greenhouse plant, intended to bloom in February, March, &c., the plants will be quite safe at from 35° to 40° during the three previous months; and if housed in that low temperature scarcely any water will be wanted, unless the weather should be bright and the atmosphere very dry. If the plants are to be bloomed in winter, they will require an average of at least 45°. Acting on the first supposition, the plants should stand cool, airy, and rather dry in winter. As the days lengthen, heat and light come and start the flower buds. An airy position must then be secured, and the temperature not below 45° for any length of time, or the flower-buds will damp and rot, and the fine scent will be destroyed. When done blooming, pruned, cleaned, pinched, &c., after a week or so, the plants should be kept in a close, moist part of a greenhouse, or under the shade of a vinery at work, or under an early Peach-house, removing to a cold pit, where more light could be given, and still the plants be kept a little close in June, July, and part of August; and then be exposed to the full influence of the sun until the end of October, taking care, however, that heavy autumn rains were shot past the earth of the pots; that the pots themselves were not exposed to the mid-day sun, though the branches should be in autumn; and then housing the plants before the buds were injured by frost. These minutiae attended to, there will be no want of bloom.

R. FISH.

MOOR PARK.

THE SEAT OF LORD ROBERT GROSVENOR.

The Kitchen-garden at this place is situated at a considerable distance from the house. You have to enter the Park from the north side of the garden, rise a hill, and descend a slope to reach the house. A narrow gravel-walk forms the pathway. Although, in fine weather this walk is pleasant enough, yet in winter it must be dreary. In this respect there is a fine opening for improvement. Already there is a beautiful broad path leading to the Pleasance I mentioned in a former communication. In that lovely spot there is a Temple containing seats. I would propose this as a sort of half-way house to the kitchen-garden, and from it form a walk to the fruit, vegetable, and plant-garden. This walk would be an easy one. There would, after leaving the Temple, be no hill to climb. I should suggest that it should be an evergreen, warm, winter walk, planted on each side with Laurels, Arbutus, Yews, evergreen and striped Hollies, Laurustinus, &c. I am certain this would form a new and very pleasing feature in the pleasure-grounds at this fine old place. The kitchen-garden is well placed in regard to aspect and shelter. The ground slopes to the south, and the soil is good. The subsoil is clay, but well drained. The walls are lofty, and well clothed with healthy trees, of which the famous *Moorpark* Apricot forms a large portion. It seems rather doubtful whether this best of all Apricots was raised here from seed, or introduced from the Levant. Mr. Sparrow says, he believes, from all he can learn on the subject, that it was raised from seed; but who by, or when, is unknown.

There is a curious circumstance respecting the walls here. Every few years a considerable length begins to wave from the perpendicular, leaning to the south. This inclination gradually increases, until at last down comes that part of the wall, destroying the trees, and causing a great expense in re-erecting that portion. I saw a part that had commenced this downward progress when I was there. Of course, deep foundations have been laid, and every precaution taken that skill and judgment could suggest; but all seems in vain. I suppose the cause is the clay subsoil, and the heavy rains of autumn and winter, which gradually sap and undermine the foundations.

I observed above that the Plant-houses are in the kitchen-garden. There is a small stove, in which the fine plant of *Medinilla magnifica* was the finest object. There were also good plants in bloom of *Stephanotis floribunda*, and the beautiful *Tabernamontana coronaria pleno*, with large white flowers, rivalling the Camellia and the best Gardenias. The greenhouse is large; formerly it was a simple lean-to house facing the south; but Mr. Sparrow added to it, glazed the back, and thus changed it into a span-roof, making the stage to correspond in form. He finds the north side useful for Camellias and other plants in bloom, the flowers continue much longer in perfection, and such evergreen plants do best there in winter. There were some very good specimens of New Holland plants in flower, especially *Leschenaultia formosa*, two or three very dense bushes covered with their bright scarlet blossoms. To keep them bushy, they are constantly pinched in, which does away with the necessity of a bundle of sticks.

Chorozema varia nana, var. *illicifolia*, a charming plant, which ought to be in every greenhouse. It was four feet high, and two-and-a-half feet through, and was literally loaded with its beautiful flowers.

Kennedya longipedunculata, one of the best of the genus, was equally fine, every shoot had bunches of scarlet flowers upon it.

Boronia serrulata, a most healthy plant, promising to make a good specimen next year.

The Heath tribe had also its representatives here. Very good bushy plants of *Erica Cavendishii*, *E. depressa*, *E. ventricosa*, &c., all bushy, good plants. It was the more creditable to the manager of these plants that they are so well grown, without any idea of exhibiting them, but solely for the gratification of the noble owners, and his own satisfaction and credit. In this house, I noticed several handsome plants of *Ardisia crenulata*, with abundance of their beautiful scarlet berries. This plant is usually grown in stoves, but it seems that the greenhouse suits it quite as well. It is used here to garnish the hall in winter, and a very appropriate plant it is, for that reason.

In the Fruit department there are vineries and peach-houses. In the early vinery the Grapes were quite ripe, fair bunches, good berries, well coloured. The crop of Peaches and Nectarines was rather thin, a circumstance that could not be accounted for. The trees were perfectly healthy, with fine, clean foliage. Probably it was owing to the wet autumn of last year.

In the hardy Fruit department, I noticed a long row of Pear-trees trained as weeping trees. They are first trimmed standard height, and then the young shoots trained downwards. The upright shoots, which such trees, when healthy, are sure to attempt to push, are kept under by diligent disbudding all through the season. Trees so trained are very ornamental, and though we may expect they will not be very long lived, yet they are so productive that the plan is worthy of adoption, and when they are old they may be easily renewed.

I was much pleased with the way in which that useful vegetable the *Pea* is cultivated here. A long south border was cropped with them, and three sorts were sown all on one day. The first to flower and be fit for use was the variety named *Daniel O'Rourke*, the second, *Sangster's No. 1*, and the third, *Early Warwick*; all good bearers and excellent Peas. By the time the first was gathered the second would be ready, and the third would succeed the second.

In the open quarters, two other sorts were sown on the same day; these were respectively the *Champion of England* and the *British Queen*. The first would succeed the *Early Warwick*, and the second come in after the first. This is an excellent plan, being an economy of time, and "regular system of a succession of crops." Mr. Sparrow assured me that he found this method far better than the old way of sowing a crop now-and-then. He manages the same way with his *Cabbage* quarter, with this difference, that he mixes all the sorts that he grows together in the seed-bag, and, consequently, plants them out mixed. The same piece of ground then furnishes him with this useful vegetable all through the season, the earliest coming in for use first, and later kinds succeed them, and also furnish sprouts through the winter.

There has been raised here a new kind of *Lettuce*, which has been named *Moor Park*. I saw a border of it adjoining to another of the *Brown Cos*. The *Moor Park* appears to be even hardier than the latter variety, and cabbages well without tying. It is, besides, a better colour, and bleaches well in the heart. I do think this is a very superior variety, and seedsmen would do well to try to get it, and introduce it generally to the public.

Any new Implement that comes under any one's notice ought to be made known to the public, as well as new Plants, Fruits, and Vegetables. I saw, at Moor Park, a very ingenious implement, which is worthy of notice. It is a *ladder*, but when not in use, and folded up, it looks like a *pole*. It was in the library, and was used to reach the books from the higher shelves. The steps are iron, with revolving socket and ball joints. On taking hold of the pole and pulling one side it divides in two, and the steps are seen; by continuing

to pull down one side and shove up the other, the steps reach the horizontal line, where a catch stops any further progress, and then the pole is a complete efficient ladder. This no mere plaything, but a really useful instrument. It might be introduced amongst garden implements, especially in vineries, to prune the Vines in summer, and in plant-houses to train creepers. The house-steward assured us it had been in use for several years, and was not liable to get out of order. When folded up, it will stand snugly in any corner.

T. APFLEBY.

THE FRUIT CROPS OF THE PAST AND PRESENT SEASONS.

THERE are few things in the gardening world of more importance than a "good fruit season;" for though certain modes of culture tend to increase the chances of the crop being a good one on trees which receive a large amount of artificial assistance, yet the bulk of our fruits are, in a great measure, subject to the vicissitude of the weather, in such a way as to leave the cultivator but little control over them; and some of the causes which operate on their well or ill-being are of so uncertain a nature, that a few passing remarks of what has come under my own eye may not be altogether out of place here; at the same time, I will promise to keep my observations strictly within the scope of the district I write from, and more especially in the garden at this place.

Recurring as far back as 1850, I may say that the spring of that year was moderately early, wall-trees being in bloom by the end of March, while on the 26th of that month we had the thermometer down to 17°, and on the 28th at 18°; these points being lower than any that winter, save the 29th December, 1849. Now 14° or 15° of frost is no joke in the blossoming season; but somehow the damage done was not so serious as might have been expected, as the crop of wall-fruit was good that year, and the protection the trees had at the time alluded to was simply a quantity of Spruce Fir branches nailed against them, while some had netting in front of them, or other homely contrivances; but the great secret in their preservation lay in a natural cause, not in an artificial one. The air was exceedingly dry, as likewise was the ground; so much so, that the frost took but little effect on the ground, which it would have done had there been moisture; but, in fact, the grass and other things seemed parched for want of it. Suffice it to say, the crop of wall-fruit that year was good, and that of orchard-fruits fully an average one; but, as the autumn was anything but a fine one, the crop of the ensuing season was under an average, both on the walls and in the open ground. This arose partly, I should say, from the defective state the preceding autumn had left the bloom-buds, and the absence of sunshine in the spring. Frosts there certainly were; but I find, on looking at my register, that 26° was the lowest point after the middle of March; but the cold and wet more than compensated for the sharpness of the frost, so that the crop of wall-fruit in 1851 was anything but good, and that of orchard-fruits very indifferent. Fortunately, however, the summer and autumn were favourable, so that what fruit there was arrived at a fair state of perfection, and the trees ripened well, so that the blossom of the succeeding year, 1852, was tolerably good, and the season being dry, much like that of 1850, a good crop was the issue. Notwithstanding the thermometer fell on the 20th April to 21°, and on the 4th May to 27°, still, the dry state of the atmosphere, combined with the vigour of the well-set buds of the preceding autumn, tended to secure a crop; orchard-fruits being also tolerably plentiful at the same time; but the wetness of the autumn rendered it impossible for the well-maturing of

the buds for the next year, consequently, the crop of 1853 was slight again. In this instance, I will admit it was much affected by some sharp frosts in May; on the 6th of that month the thermometer indicating 6° of frost. This was fatal to Cherries and many other orchard-fruits, while the summer was again a wet and cold one, the autumn especially so; but the deficiency of fruit enabled the trees to attain a little strength, so that the crop of 1854 was good, the spring being a dry one; and we escaped the severe frosts which did so much damage about London at the end of April. The lowest range I have on record, after the 10th of March, was 6° of frost on the 13th of April, the atmosphere and ground being exceedingly dry at the time. The orchard-fruit was moderately good, also, better than in 1853; and though the month of May was a dull, cold one, and the three following ones no way remarkable, yet September and October were fine, enabling the buds to be again perfected in a way calculated to ensure a crop, barring extraneous causes.

Before saying anything of the crop of the present year, I may mention, that we have had our full share of severe weather the past winter; the early part of it, up to the middle of January, being mild; after that, to the middle of March, was one continued frost, or nearly so, the ice at the end of it being eleven inches thick on the ponds, and the lowest point of the thermometer 6° on the 10th of February; the quantity of snow not being very great, but very much drifted, so that some of it was still lying in the full sun on the 10th of April, and possibly later where it had been drifted. I may remark, that the latter part of March and the whole of April was dry; the whole rain I have registered for the latter month being 0.26 inch, and that all fell in the second week. May has been much more moist, there being 2.32 inches of rain that month; and up to the time I write, the 12th of June, we have had about half-an-inch of rain. But the spring has been an unusually cold one, without being in any one instance remarkable for frost; for I find, after the 2nd of April, my thermometer only once sunk as low as 28°, while on the 16th of that month it rose to 79°, in the shade, but the generality was very cold, the days being more so than the nights; consequently, vegetation was much retarded, and none of our orchard-fruits were fully in bloom until the 12th of May; but from then to the 23rd, some fine days brought the whole out; not, however, until the trees had been more clothed with leaves than usual, and the subsequent fine weather hastened their period of setting, so that the "beauty of our orchards," was of shorter duration this year than usual; and at the time I write, although I may say there is a general promise of a fruitful season, it is not so generally so as was expected some time since; so many causes combining to create fertility, or otherwise, that it is even yet too soon to say, for a certainty, whether everything will be plentiful or not. *Wall-fruit* certainly looks well, and the trees healthy; *Apricots* excepted; which, being over-taxed last year, are more sparingly set this. *Gooseberries* are also a good crop, and *Red* and *White Currants* pretty well; but "*Black*" are not so good as was expected; and I fear the *Raspberries* have suffered from the severe winter. *Cherries* are set well, and *Plums* may be said to be nearly the same. *Pears* are, however, irregular; some of the early, common sorts, as *Sweet Water*, *Crawford*, and *Green Chissel* are plentiful enough, while the better kinds look thin; and I am far from certain that the *Apple* crop is past danger yet, as I saw some trees in the middle of an Orchard, whose south or south-west sides had the blight in its worst features; and though this may not yet be general, it is possible it may be so; and those who have witnessed its pernicious effects know full well that all hope for a crop is over when it attacks. It is somewhat singular that it should proceed from the direction we think the most

congenial one for the wind to be in, yet such is the case; however, it is to be hoped that the evil will stop without going farther; and I think we may reckon on a good fruit year, providing that the weather and other things favour the development of the fruit now set. But I will report hereafter; in the meantime I may say, that the results of the last few years have materially altered my opinion of the "setting" of fruits, as well as the protection and other treatment they are subject to; but as the subject is too long a one for the present article, I must wind up by a few extracts from my registry of the weather, which will, perhaps, enable others keeping notes to compare them together, so as to see wherein the difference between the present and former years really lies.

Asparagus up on 12th April 1850

"	"	16	"	1851
"	"	10	"	1852
"	"	19	"	1853
"	"	17	"	1855

Cuckoo heard on 16th April 1850

"	"	15	"	1851
"	"	18	"	1852
"	"	12	"	1853
"	"	15	"	1854
"	"	18	"	1855

Nightingale heard on 10th April 1850

"	"	13	"	1851
"	"	12	"	1854
"	"	21	"	1855

Peas in blossom on 13th April 1852

Swallows seen on 21 " 1852

Apple blossom partly out 19th April and fully so 23rd 1854

" " 19 May " 22nd 1855

The above notes I have selected as bearing on differences of the seasons, which is the most remarkable in the blossoming of fruit, last year and this; but as there are other causes at work besides those generally attributed, it is needless saying more here than that the disparity, in a great measure, was in the April of 1854 being unusually fine, while the May of that year, as well as the whole spring of this, has been unusually cold; yet it is possible that a fortnight of fine weather after the present time will restore things to their balance again. But I will return to this subject; in the meantime, I shall be glad for our friends to forward any particulars corresponding with the above from their different localities.

J. ROBSON.

HOW NEMOPHILA SHOULD BE SPELT.

To save time and trouble allow me to quote the following paragraph from the communication of "H. G. M.," at page 211:—

"In the *Cottage Gardeners' Dictionary*, page 631, there is an article on the *Nemophila* (so spelt). The derivation of the name there given, is "from *nemos*, a grove, and *phileo*, to love, from an erroneous idea of their place of growth." If I now find fault with the incorrectness of this derivation, at least let me bear my testimony to the ingenuity of it. But, let me suggest that *nemus* (not *nemos*) is the *Latin* for a grove, and *φιλέω* (*phileo*), the *Greek* for I love. So that, at best, this precious word is a Græco-Latin monster. But I well remember when this flower was first introduced as an annual—1833 is the date given for the *N. insignis*, which is, perhaps, the most common. Its name in those days used to be *Nemo'phylla*, derived, I imagine, from *νέμω* (*nemo*), to distribute, and *φύλλον* (*phyllon*), a leaf, probably from the spreading habit of its growth. It seemed good, however, to divers fine ladies, to lay the accent on the second syllable, instead of the third, and the poor *Nemophylla* became fine-lady-ized into *Nemo'phylla*; and then, of course,

as the absurdity of the pronunciation became felt, its *spelling* had to give way, and to appear as *Nemo'phila*. And now, of course, people are obliged to cast about for some monstrous derivation to support a monstrous word. Many others of the same kind might be found; but this is, perhaps, one of the best samples of the effects of arbitrary pronunciation.—H. G. M."

The writer of this communication tells us that he is a clergyman, and an amateur gardener; therefore he will feel sorry to hear that every word he has here written about the *Nemo'phila* is the reverse of the truth.

I am responsible for all the derivations of the names of genera in THE COTTAGE GARDENERS' DICTIONARY. I have manufactured a good many of them myself, and I took more pains with the rest than most people would believe. My knowledge of the language of science is as thin as air, compared with that of learned men; but it seems as if learning, without some practical knowledge of the subject, is as bad as little or no learning. Long practice, instead of "much learning," enables my eye and ear to detect false quantities and false accentuation in the names of plants; and the first glance at the above paragraph enabled me to see that "H. G. M." was out of his depth, and knew very little of the subject on which he wrote; and I challenge the writer to prove a single word of what he states about *Nemo'phila*.

Singularly enough, there is a small error in the heading of *Nemo'phila* in the Dictionary, and I suppose I must father it; but it escaped the notice of "H. G. M.," at least he did not point to it. I allude to the words, "from an erroneous idea of their place of growth." The "idea" was not erroneous; but it strikes me that the "idea" put "H. G. M." on the wrong scent, that he thought it "erroneous," and therefore went into those strange errors himself endeavouring to put it right.

I recollect the very day on which *Nemo'phila insignis*, from which we gardeners took to the genus, made its appearance in print. It was on the first of Oct., 1834, and from that day to this, no one here in England, or on the Continent, or in America, has ever altered a single letter of the name, that is, in print, bearing the authority of evidence, and without such alteration the accent could not be changed by rule. The accent, in fact, has never been changed at all, except, perhaps, in some trade list or catalogue; but such are not works of authority for botanical terms; such lists could not be meant by "H. G. M.," as "divers fine ladies who laid the accent on the second syllable;" but I protest against that kind of insinuation, for I have been too long on the turf not to know that ladies are far more accurate in their pronunciation of these names than gentleman who have not studied the subject.

So far for assertions; but having challenged "H. G. M." for proof, I must, in fairness, produce my own, and here they are:—

A respectable episcopal clergyman, Barton by name, who lived in Pennsylvania, was an amateur gardener, and he had a son who was born in 1766. Fourteen years afterwards, the clergyman died, and left his son as poor as a gardener's son; but by perseverance and well-doing the young man got up in the world, and for the last six and-twenty years of his life, he was Professor of Botany in the University of Philadelphia, also Professor of Materia Medica, and President of the Philadelphia Medical Society. Dr. Barton, at his private charge, "sent out," first, Pursh, and after him Nuttall, to explore the hidden flora of North and North West America, and one of their finest discoveries is called *Bartonia*, after their liberal patron. Another of their new plants was called *Nemo'phila phacellioides*, by Dr. William Barton, nephew to the first professor, who succeeded him in 1815, and who published a Flora of North America, between 1821 and 1824. In this Flora, *Nemo'phila* first appears in print, plate 61, just as it is at this very day.

In 1822, the new *Nemo'phila* appeared in England, first with John Walker, Esq., Southgate, and next with Mr. Barclay, of Bury Hill. Mr. Walker's plant was figured by Dr. Sims, in the Botanical Magazine, plate 2373, and the Bury Hill one was figured by Dr. Lindley, in the Botanical Register for 1823, plate 740. Nuttall suggested the name to Dr. Barton "from its predilection for shady woods, in which places only it is found," and Dr. Lindley gave the meaning

of the derivation, or etymon, in the place aforesaid, just as I repeated it in THE COTTAGE GARDENERS' DICTIONARY.

The next *Nemo'phila* was *parviflora*, in 1826; but before then, Dr. Brown had set the limits of *Nemo'phila*, and *parviflora* had to be excluded, because the private marks would not tally with the "limits."

Nemo'phila aurita, with little purplish flowers, was the next, and the first of them, from California, by Douglass; it was figured in the Botanical Register for 1833, plate 1601, where it is said, to "require a damp shady border; if sown in a place exposed to the sun it withers up and perishes."

Nemo'phila insignis is the next, and was named by Mr. Bentham, the most exact botanist in Europe, and by him is described in the Transactions of the Horticultural Society, new series, page 640.

Nemo'phila atomaria was the next, in order of time. The Horticultural Society received it from Dr. Fischer of the Imperial Garden at St. Petersburg, who had it from the North West coast of America, through the Russian settlements there; and *Nemo'phila maculata* was the last. This was a discovery by Mr. Hartweg, who named it *speciosa*, a name which Mr. Bentham thought objectionable, and he cancelled it, and named it *maculata*, and there is a figure of it in the Journal of the Horticultural Society for 1848, page 320.

From 1822, to the time I was engaged on the derivations and affinities of genera for the "Dictionary," *Nemo'phila* went through the hands of half-a-dozen learned and practical botanists; but still it was kept as pure and simple as it came from the hands of Dr. Barton.

I shall now wait for "H. G. M.'s" proofs of this and the other errors in the "Dictionary," he alludes to; for if such there be, nothing would give me more pleasure than to thank him for pointing them out, that I might correct them.

D. BEATON.

A clergyman, whose initials happen to be the same as Mr. Beaton's, writes as follows:—

"It would be difficult to crowd a greater number of mistakes into the same compass than has been done by your correspondent "H. G. M.," at page 211 of THE COTTAGE GARDENER, in his criticism on the spelling of the word *Nemo'phila*.

"With all due deference to his Greek and Latin learning, permit me to suggest to him that *νεμος* is a Greek word signifying "pasture," or even "grove."

"That even if the derivation of the word were from *νεμω* and *φίλλω*, the accent of the compound would still properly be on the antepenult, and not, as he supposes, on the penult. That the name was given to the genus by Nuttall, adopted by Barton, and all botanists, (as Bentham, Endlicher, De Candolle, Dietrich, &c. That it was published in this country at least as early as 1823 by Sims, in Vol. 50 of the "Botanical Magazine." And that by all has the word been invariably spelt, as no doubt it ought to be, *Nemo'phila*, being derived from *νεμος* a grove and *φιλέω* to love.

D. B."

OXFORD—THE THOUGHTS AND MEMORIES IT RECALLED.

HAIL Oxona! Rare old town! I love your old-world features; my mind seems to expand each time I view your ancient colleges and time-worn fanes; my silent feelings gather enthusiasm and strength, and warm towards those pioneers pointing upwards to a better country.

Well, a favourable reply being given to my inquiry,— "Might I trouble you to take charge of this umbrella?" I was off to the Flower Show.

An umbrella is an excellent contrivance in its way, particularly when one's best hat is put in requisition on a day that looks suspicious for rain; but never, my young gardening friends, take such construction to a flower show, if you are intent on taking notes, and placing your observations upon paper.

Arrived at Trinity College, at one of the side entrances, opposite Wadham College, I procure my ticket, pass, and deposit myself withinside, in the centre of the middle entrance, and facing the broad paved way which leads up to

other large iron gates and tall palisading, flanking a quadrangle of the College. I thus allowed the whole *coup d'œil* of the prospect to burst upon my view. Two extensive parallel grass lawns flank the central road; that on the right hand traversed at right angles by a gravel walk, and a border planted with annuals, herbaceous shrubs, and Yew-trees, finally protected by a wall covered with Ivy; that on the left hand is flanked by a row of aged Yews; then a broad gravel walk, canopied over by two rows of trimmed Limes; and on the other side of them a lawn, with large oval beds filled with shrubs; a serpentine gravel walk also insinuates itself here, flanked by a broad border containing shrubs, some very fine old Elms, Horse-chesnuts, Oaks, Acacias, &c., and then the wall. Here, embowered amongst the trees, was to be found the refreshment tent.

The lawn on the left of the entrance was occupied by two marquees, *par excellence*, and the Coldstreams' Band. That on the right hand with three smaller exhibition tents, and two tents for the ladies, with the Thame Brass Band in the corner. Seen from the spot where I stood, the whole had a substantial and right pleasing effect; the College forming a back ground for the picture, with a medley of periods of architectural pretensions, parts of its time-honoured brow appearing dark and sombre, compared with the fresh and luxuriant tints of summer displayed by the full and varied foliage of the noble trees around.

After enjoying the prospect for a short time, I made a quick passage through the tents, and from the confined space (quite room enough, however, and to spare, to contain the productions sent), I am warned to make my notes; for in a short time to be able to do so would become next to an impossibility.

It would be an invidious task in me to enter upon a comparative criticism, or to insist upon my law as to how those productions should or ought to have appeared; I leave these nicer points to older practicals. What few remarks I may indulge in, will be made with a perfect good feeling, though, as a mere observer in passing, I will say, that were I to become an exhibitor at what might and ought to be one of the leading Horticultural Shows in the kingdom, I would endeavour to produce something worthy of it, and arrange my productions so that they could be seen to the best advantage; although I do not pretend to severe technical knowledge, so termed, still, I would contrive to get good orthography, and the names of the plants legibly written, as shortcomings were to be observed here to-day in these respects, more especially to those who would wish to treat the exhibition in a scientific point of view. Mr. Beaton's report on the Crystal Palace Fete is a study to begin with towards a proper arrangement of plants and fruit, their colours, &c.; and his enthusiasm, as he wrote, even led him to say how they ought to be disposed at dessert.

As we cottage gardeners do not profess to keep our thoughts under a bushel, but to circulate them freely, I will ask Mr. B., as a man of taste and judgment, if he approves of the mode of the dessert remaining upon the table during the time of dinner. I disapprove of it entirely; there is something so decidedly to be preferred by its fresh and refreshing appearance after the more substantial viands are dispensed with. Fruit can never be so highly appreciated when it remains exposed to view during dinner, as a stale idea to be discussed afterwards. Now that the larger and coarser joints are served from the side table, rare and beautiful plants would properly be allowed to occupy their original sites; and these certainly would be food for the mind and conversation, without prematurely tantalising the appetite, and where no animal idea could become mixed. Flowers and plants could be so arranged, cross-corners, shades of colours, and so on, so that when the dessert made its appearance after the mutton, it could be so situated, in cross corners and colours corresponding to the flowers, shewing a new phase for effect at the proper moment, and enhancing the value of both. Likewise with the *artistes* of the kitchen; their sides, flanks, removes, &c., could be connected, according to their kind and colour, to correspond with the particular class of flowers intended for decoration that day, or any day, as long as the company stay, to the "end of the chapter." Considering the subject after this manner, the minds of the gardener, the cook, and the butler, would become more connected, than, so far as my

observation allows me to judge, has been the custom up to the present day; and I have seen dinners served in a great many of the first establishments in the country; and even from the lowest description of lodging house in the Mint, up to Royalty itself.

Of a dinner in the Mint (one of the lowest neighbourhoods in the Borough of London) though, under the circumstances I there encountered it, either for friend of mine, or any other person whatever, may the interposition of Providence for ever save us from the partaking! I feel now I have mentioned so much, I may as well explain myself, and recount, in an episode for this paper, how and why I came to witness it.

A fine young man (my cousin), through distress of mind, entered upon a career of dissipation, and he had been lost to his family for some time. By one of those mysterious clues which bring us intelligence, or a man, just when wanted, I was made acquainted with his whereabouts, when I at once set about his discovery. I found him—like a poor, wounded bird, as it conceals itself from sight when it is about to die—at a haven for the respectable fallen; in fact, it was a hovel for the speculation of death; poor creatures—men and women—allowed a miserable shelter and subsistence for the mere chance, it appeared to me, of divulging their names or their friends, when a decent interment, and a reimbursement to their protector, generally followed; when they die, and make no sign—the workhouse (there was a workhouse in the Mint at the time I speak of) over the way, from which they shrank when alive, sent their undertaker, and the unfortunate was buried, with his, more generally *her*, sad secret, which, of course, proved a losing affair to the speculator. Well, I found out this place, and inquired of a fat, dingy, red-faced woman, if a young man of the name of W. H. was there; and I was answered in the affirmative by the now obsequious woman. I requested to see him, and was ushered into a little room, garnished with dirty, tawdry finery, and evidently got up for this sort of thing. Some satisfactory conversation passed, and the fat woman opened and made her exit through another door, quickly followed by myself; but this was a mistake, she requested me to stay where I was, and W. H. should come to me; but I saw, at a glance, quite enough of that apartment; I shall never forget it, or the effluvia that issued therefrom. The poor suffering creatures, men and women indiscriminately, were lying on filthy bedding, upon the floor, around the room; and on a table in the centre were basons containing, what appeared to me to be, broth and gruel for such as could eat,—and this constituted a dinner in the Mint! After some time the young man appeared, supported between two women of sinister aspects; they placed him on the dingy sofa; and my readers must imagine a person in the last stage of consumption, with but a day, a week, or a month to live. Poor fellow! with great difficulty he poured out his heart to me, but I was too late to be of any worldly service to him—and he died. A young woman, to whom he was sincerely attached, and with whom, for a long time, he had contemplated marriage, was over-ruled by her parents to marry an older and a richer man. From that day my relative was doomed. He had lived some years with a wholesale tobacconist in the Borough; and had not the man with the money offered, or could W. H. have proved true to himself, he might now, in all probability, have been a flourishing tradesman, for, at the time of his fall, his employer had it in contemplation to make him his junior partner. A year or two after this I was walking, in the evening, with my brother through the Haymarket, and I saw a fashionably dressed woman, who made me exclaim with astonishment, "Look there!" "Yes," said my brother, "she did not live long with her husband, and now she is gay—very gay!"

J.

(To be continued.)

COCKROACHES, OR BLACK BEETLES.

SOME of your readers may be glad to hear of an effectual poison for these disagreeable pests. I have succeeded in completely clearing my house of them by the use of Chase's Beetle Preparation (14, Holborn). I recommend those

who are troubled with these insects to place the pills in every place in the house haunted by them, and to repeat the application *twice* after intervals of ten days; by this means, the *successional* crops of young beetles are destroyed.—C. W. J., *Croydon*.

(This is not a mere puff, but is sent to us by a gentleman who has been benefited as he states.)

HEATING BY ARNOTT'S STOVE.

I SEE, in your pages, so many applications for an easy mode of heating a greenhouse, and so much abuse of my valued friend, the stove invented by Dr. Arnott, that I think my experience on this subject may be of use to some of your readers.

About fifteen years ago, I built a greenhouse and a vinery, of the same size, eighteen feet by fifteen feet, adjoining each other. In the greenhouse, I have a stone shelf in front, two feet six inches; then the walk three feet six inches; and next the stage, commencing from the floor, and with nineteen narrow shelves terminating three feet from the top of the back wall, in which space the ventilators are fixed. They are on the hit-and-miss principle—working on rollers, by a cord which hangs below, and having, when open, four spaces in the back wall, each measuring twenty inches square. The front lights move on pivots with a pierced piece of flat iron, to regulate the amount of air. The top-lights do not move. In the centre of the back-wall stands an Arnott stove, eighteen inches square, let into a small brick chimney. The access to it is by a back-door, thus showing the whole of the front as stage.

In the vinery, there is a pit in the middle for tan, a walk all round it, and an 18-inch Arnott Stove stands in the centre of the back wall, with a sheet-iron pipe, without footing, carrying the smoke to the top of the house, where it is let into a small chimney. The object of this iron pipe was to give greater heat, and it has answered this purpose. The ventilation is the same as in the greenhouse. On the top of each stove stands a zinc pan—the same size as the top of the stove, and three inches deep, always containing water. Each stove has a door with the regulating screw in it; within this stands the ash pan, into which the ashes fall, and are raked; much of the dust is thus avoided, which would escape into the house if raked to the outside, as the dust, from containing the ashes, can be carried out and emptied at once. The stoves cost £4 each. I had the same gardener from the commencement till the end of last March, when my present gardener came to me. Now for the result. First, in the greenhouse.

I am scarcely aware of any plants having been lost through frost in the many years that I have had it. During the late intense frost, we hung some mats in front, and moved some plants from the front shelf; but I do not know of any plant having been killed, or having suffered. That we have kept something during the winter you will infer, from our having bedded out above 150 Scarlet Geraniums, besides Calceolarias, &c. These all wintered in the greenhouse, most of them in shallow pans. They were all potted in March, by my new gardener, and put into a cold frame, and now come out very tidy plants, showing plenty of buds. My Pelargoniums are now coming into flower, about seventy in number; a few early ones for cut flowers, which were in the Vinery, being over. Let me mention a few favourites. Their names have been culled from your pages, or my own observation; and they are now to be had for 1s. or 1s. 6d. each.—*Conspicuum, Governor, Magnet, Incomparable, Chieftain, Mochana, Exhibitor, Enchantress, Rubens, Silk Mercer, Pearl, Rosamond, Tyrian Queen, May Queen, Virgin Queen, Gulielma, Forget-me-not, Sylph*.

If *Sylph* could speak, she would tell how she and her ancestors have been protected for many winters under the fostering warmth of Dr. Arnott's Stove.

Our Azaleas are over; forty Fuchsias coming on. In short, instead of losing plants in my greenhouse, I have more than I know what to do with.

The fuel that I use in the stoves is gas-coke. During the two last years they have consumed ten tons. The cost here is 16s. per ton, making £4 each year. This has heated the

vinery, say, for eight months in the year; the greenhouse for four months; and another Arnott Stove in the lobby, which keeps a large staircase at a comfortable temperature, for four months also. In other words, the vinery has cost £2, the greenhouse £1, and the lobby £1, during each of these severe winters. The stoves seldom go out, burning for one or two months together. This is attained by having the large size of eighteen inches, and is a great saving in trouble. The regulating screw puts them to sleep in a warm day, and soon increases the heat in a cold one. A common error is to take the door out, and produce a very quick draught; this is necessary at first lighting, and occasionally to get up a low fire, but a stove should never be left in this state. It produces a violent heat, which melts the fire-bricks; they run and clog up the bars, and it is then difficult to get the fire to burn. The stove has to bear the blame.

The objections to an Arnott Stove in a greenhouse seem to be the following:—

1. It gives too dry a heat. Here is a letter that I received last week. You must have many similar complaints—"The winter makes such havoc with our bedding-out plants, that I must have some dry heat for them to overcome frost and damp. I am thinking of adopting a frame I already have, and heating it by an Arnott's Stove, conducting the smoke-heat round the sides by a flue. What is your opinion of its efficiency? You, I know, use them, even for forcing." I doubt this plan answering; for the principle of Arnott is to give out the heat—not to carry it off; and the escape of smoke is so small, that I doubt its heating the proposed flue; but the desideratum is *dry* heat. I find that my zinc pan of water, constantly evaporating, gives sufficient moisture for a greenhouse; but if more is required, it is very easily obtained, as I shall show, when the vinery is described.

2. That the temperature is unequal; and there is a want of heat in the front of the house. This objection is well-founded, and applies more to a vinery than a greenhouse; yet the difference is not so great as would be expected; and if, during intense frost, we draw our favourites a little closer round the fire, and keep them alive and well, there is not much to be complained of. Besides, greenhouse plants require different degrees of heat. I admired the judgment of my new gardener on his arrival, who, with the usual dislike to Arnott's Stoves, is determined to make the best he can of his appliances, in placing the Cacti just over the stove.

3. The escape of sulphur and other noxious gases. I read much more than I hear or feel of this. My house was built whilst there was a duty on glass. The size of the panes four-and-three-quarters by three evaded the duty. This causes much lap, and gives more ingress and egress both for air and water than there is in a well-finished modern house. The moist vapour from the zinc pan also corrects the other vapours; and a hint which I adopted from your pages, and is applicable to all hot-houses and pits, of giving a little top air early in the morning, whenever the weather will permit, in order to allow the night exhalations to escape, has been very useful.

4. The trouble of keeping up the fire. From this I entirely dissent. If a fair amateur wishes to attend to her own fire, only fancy the advantage of applying so cleanly a material as coke inside her greenhouse, instead of descending to a stock-hole to light a fire and apply coal or dross.

The necessary attendance in ordinary weather is, to rake out and make up the fire in the morning; to replenish it at dinner-time; and to leave the stove full of coke about eight o'clock, when the garden is left. Of course, in severe weather extra attention is required. It is well to see that the stove, chimney, &c., are in good order, before commencing another season.

I enclose a single Grape from my vinery, not full swelled off, or coloured; but it may enable you to say whether it is the shrivelled wretched thing that gardeners would expect from a house heated by an Arnott stove.—A. L. M., *Near Lincoln*.

(There could not be a finer berry of *Black Hambro'* Grape than that which was enclosed.—Ed. C. G.)

FROST AT MIDSUMMER.

Four Miles South-west of Maidenhead.

WHAT! Ice on the morning of the 21st of June? Yes; this morning, at five o'clock, the fine, large, horizontal leaves of a Burdock, which was growing on the edge of a ditch, was as stiff as a piece of wet linen would have been after an hour's exposure to 10° of frost, and when I crumpled the leaves up the ice scaled off from it. And the Nettles, which the day before seemed to bid defiance to anyone, drooped their heads as much as if they had been cut and placed upright under a wall for three hours in a sunshine of 90°, and *noli me tangere* seemed no longer applicable to them. The glass registered 35° during the night. At twelve o'clock to day it marked 67°. I did not see any ice on water, but am told there was some, and also that the *Potatoes* and *Scarlet Runners* are very much cut in places. One man told me he saved his by the cold water system.

My *Pears* and *Apples* are falling very much, I expect from the effects of continued cold weather when in bloom, and I think if we had had one more degree of frost at that time we should have lost the remainder. At my cottage, a distance of two miles from here, I had all the bloom on a fine tree of *Uvedale's St. Germain* Pear, on the west side of the cottage, all killed; also the bloom on a fine bush plant of *May Duke Cherry*.

I have sent a register of the Beatonian winter, which I had copied before, but could not find time to send it. One thing strikes me as remarkable, and that is, the temperature of two successive nights often being the same. It is the same in all you have published, as well as the enclosed.

Please to tell Mr. Errington, the only Pear-tree I have with the *American Blight*, out of forty trees, against the walls, and on his platform, nearly all of them under fifteen years old, is the *Winter Nelis*. I have three plants, but only one affected. I have nearly killed some young Pears by dressing them with Lamp-black and Neat's-foot oil, mixed, and put on too thick, for the scale insect. Please to convey a junior's thanks to him for information derived from his writings.—ARGENTUM.

1854.	1855.			
OCTOBER.	JANUARY.	FEBRUARY.		
26th 27°	14th 25°	1st 19°	19th 8°	
	15th 22	2nd 19	20th 21	
NOVEMBER.	16th 24	3rd 25	21st 14	
22th 24°	17th 22	4th 26	22nd 17	
23rd 24	18th 21	5th 29	23rd 21	
24th 23	19th 24	6th 30	24th 22	
25th 32	20th 18	7th 29	25th 25	
26th 23	21st 19	8th 25	26th 31	
	22nd 19	9th 25	27th 32	
DECEMBER.	23rd 24	10th 17	28th 33	
11th 20°	24th 24	11th 11		
12th 25	25th 24	12th 22		
18th 27	26th 23	13th 22		
19th 25	27th 21	14th 20		
27th 26	28th 21	15th 16		
28th 24	29th 25	16th 16		
29th 24	30th 22	17th 18		
	31st 25	18th 9		

VINEGAR MAKING.

Your correspondent, "C. P., Kensington," page 184, is very commendable and praiseworthy in publishing his receipt for making pure Vinegar; but I cannot see how he can call it pure Vinegar, while that very questionable compound, *German yeast*, is mixed with it. I do not know what good there is in working of it with the yeast, but I can say, that for more than two years I have made my own Vinegar, by making the water boil, then adding the sugar and treacle, mixing it up well together, and letting it stand till cold. I then proceed as your correspondent does, only it should be in a wide-mouth stone jar, for the glazing in the inside of the earthenware jars is liable to be dissolved by the Vinegar;

and then it becomes poisonous. The maker should also be careful that the place where Vinegar is kept is not too warm. All that is wanted is to cause it to ferment, and that you can tell by the smell it gives off.—T. ELLIS.

NATIVE FLOWERS NEAR SEBASTOPOL.

THE following extract from a letter from the Crimea will, I think, be interesting to your general readers. It is an account of the reconnaissance on the Tchernaya, at the latter end of May; and the portion I have selected refers principally to the floral aspect of the country, and, on that account, will not, I hope, be considered misplaced in the columns of your valuable periodical.

"We started at about five in the morning. The English force, which was, as you will see, a very small proportion of the whole, consisted of the cavalry, Horse Artillery, Guards, and Marines, in all 2,500 men; about an equal number of French cavalry and artillery, and about 10,000 infantry; about 5,000 Turks, and 7,000 Sardinians. It was at first supposed that they would march to meet the army coming down from Kertsch; but this proved incorrect. We started, as I said, about five. The morning was lovely, and every one expected some fun. The English were on the right, and as they started from Kadikoi, their course, as you will see by consulting a map, was close to the foot of the lines above Sebastopol, so that there were no Russians to oppose them, and it was evident that if there was to be fighting it was not to be there. I, therefore, kept with the French. They advanced about two miles and a half across the plain, as far as the Tchernaya, having only the valley between them, and the Russians on the heights of Inkerman. This plain, across which they advanced, is very beautiful. The grass was up to the horses' knees, and, from the quantity of flowers, coloured according to the prevailing variety. Here we see acres of a bright yellow, from those flowers that are so common in our English wheat-field; here, another tract is scarlet with poppies. There, 'tis a bright blue, from a flower very common here, the name of which I am entirely ignorant of; here is a space of most brilliant purple, of larkspur, which is of great height, and which is, as far as I can see at present, entirely that colour. Sometimes the side of a rise will be covered with low shrubs, whose rich green contrasts well with the varied colours of the rest; while, in some places, the ground is entirely covered with a species of dwarf rose, the flower of which is single, and not unlike that of the dog-rose, while the flower grows frequently as large as a saucer. The odour is very sweet, as is that of the wild thyme, which is very abundant.*

"Besides these flowers, that grow in masses, and produce general effects in the landscape, the grass is filled with flowers of every shape and hue, with most of which I was entirely unacquainted. So charming a place in its way I never witnessed. Many places might have been taken up and planted, in patches, in the Chiswick Gardens, on a fête day, and would not look out of their place."

The Rose referred to would, although a single one, be a valuable addition to our gardens, if it attain the size mentioned.—THE COTTAGE GARDENER'S FRIEND.

QUERIES AND ANSWERS.

GARDENING.

INSECT INJURIOUS TO SEEDS OF THE CABBAGE TRIBE.

"Enclosed you will find a quantity of seed of *Curled Kale* eaten by a small weevil or beetle, distinguishable to the naked eye, of a white colour. The seed has been grown by myself, and kept in tin canisters such as coffee is or used to be sold in. It is about three or four years old. I should feel obliged if you could inform me whether it was caused by an insect at the time of ripening; as I think if one species of seed is attacked all of the family are liable.—BASIL FERRAY."

* This is probably the *Rosa pygmæa*, or Pygmy Rose, described in Bieberstein's *Flora Taurico-caucasica*.—ED. C. G.

[The seed of *Curled Kale* which you enclosed to us is attacked by what all seeds of the Cabbage tribe are subject to when kept in sacks, boxes, or drawers, and is what is termed by the trade "mity." It is not caused by any injury at the time of ripening, and the usual way of preventing it is to sift and clean the seed two or three times a year, if you require to keep it so long. The little beetle causing the mischief is a species of *Bruchus*, and we believe it is *Bruchus granarius*. Exposing the seed to a temperature of 150° for two or three hours it is said will destroy the insect, its larvæ, and its eggs, without injuring the vegetating power of the seed.]

MANAGEMENT OF GOLD FISH.

"Some information regarding the habits and mode of keeping Gold Fish will very much oblige.

"I have lately obtained four pair, which are to inhabit the basin of a fountain about twenty feet in diameter. This basin is supplied with water from a spring about 150 yards distant, and which is conveyed through a leaden tube. The water can be changed wholly, or in part, at pleasure. I want to know how often this should be done? Whether the coldness of that fresh from the well will make it desirable to renew but a portion daily (the basin is not more than twenty inches deep, and the water is, of course, warmed and softened by the sun and the air), and if so, to what extent? There is a basket sunk in the basin, which contains, growing in it, an Egyptian Lily and some "Forget-me-not." Will it be injurious to the fish to let these remain? and, finally, am I to believe what some people tell me, "that it is destruction to give them bread-crumbs, or food of any sort; that they must be left to feed solely on the animalculæ which they find in the water?"

"Recollect, that this water passes through a very small pipe for a considerable distance, and not likely to convey anything having life, and the water, so far as perceptible to the naked eye, is clear and *untenanted*. Such large fish would, I think, require more tangible food than they will find in it. They are now in it nearly a week, and seem brisk and healthy.—CARRIG CATHOL."

[We shall be much obliged by information in reply to these queries, from any one who has kept Gold Fish successfully. Those which lived longest, within our own knowledge, were supplied with water from a fish-pond. Water-plants were allowed to grow at the bottom of the glass vase. The water was changed two or three times weekly, and a little cooked meat, chopped *very* fine, was given them every second day. Bread is injurious to them.]

SOWING SEEDS OF GOOSEBERRIES, CURRANTS, AND STRAWBERRIES.

"Two years since I saved seed of Gooseberries, Currants, and Strawberries, with a view to emigrating. I have them now; they were carefully washed, dried, placed in dried sifted earth, and well corked up in phial bottles. I also saved Plum and Apple seed. Will they vegetate now in England? If so, is this the time to sow them; and can they be sown in the open ground?—J. W. C. W."

[You ought to have sown them three months or more ago; but you can try them still. If they will grow at all, they will have a better chance now than by waiting till next spring; and if the wood should not ripen before winter, you can keep the young plants under shelter. Sow them in seed-pans, or boxes, so as you may move them in the autumn, without disturbing the roots.]

CUCUMBERS FOR TABLE USE NEED NOT BE FERTILIZED.

"In the last number of *THE COTTAGE GARDENER*, at p. 209, "J. P. S." says, he finds his Melon and Cucumber plants to thrive and blossom well, and go into fruit, having, of course, inoculated them. You say this is not necessary. Now, I want to know, will Cucumbers and Melons swell without being inoculated; that is, without the pollen of the male flower being dusted on to the female flower? If they do not require this being done, what office was the so-called male flower intended to perform?—J. H. D."

[If Cucumbers are grown only for show or for table use, the fruit is handsomest if not fertilized. We believe the same of Melons. That impregnation is absolutely required, where seed is to be obtained, no one disputes. Mr. W. P. Ayres says, that so far as the production of fruit is concerned, impregnation is "neither good nor harm," and cites, in proof of this, a brace of fruit, which he cut on the 8th of February, 1840, each nineteen inches long, which had never been impregnated; for, at the time the female flowers expanded, there was not a male blossom on the premises, and consequently no impregnation could take place. Since that time he has cut hundreds of fruit, the flowers of which never expanded, and the same has been done by several of his acquaintances. In fact, Mr. Wilson, Mr. Spivey, Mr. Judd, and the Messrs. Ayres, will undertake to procure at the May *fete* of the Horticultural Society, from ten to twenty brace of fruit, as good as can be obtained by impregnation, the flowers of which shall be removed from the fruit before there is any chance of their being impregnated. Where long fruit is desired, Mr. Ayres thinks impregnation positively injurious, because if seed is the result of impregnation, the energy of the plant will be expended in perfecting the seed, instead of in the production of fruit, as every practical man knows that the production of one seed from it will weaken the plant more than a dozen fruit fit for table. There are instances in nature of plants perfecting their fruit without impregnation, as in the different varieties of Figs; and why not the Cucumber do the same? Another practical gardener, Mr. Kyle, says, some years ago, as he was pegging down some plants, he broke the flower off the fruit, at least four or five days before it would have expanded. He left it, however, and, to his agreeable surprise, it swelled off as handsome a fruit as any he had during that season. From that time he has never taken the least trouble respecting impregnation, unless when wanting to save seed. Mr. W. Charlton gives similar testimony, for he says, some of the finest fruit he ever grew never opened a blossom. In one instance, he broke off the unexpanded corolla, and the end of the fruit, notwithstanding which the fruit swelled, and was eaten at table (*Gard. Chron.*). Such testimony as this is unimpeachable, as far as it can possibly be carried; which is no more than this, Cucumbers unimpregnated have been known to attain a good size and perfection. But it by no means refutes the opinion, that to be most certain of a fruit not falling immaturally, one condition is that it should be impregnated.]

LONDON MARKETS.—COVENT GARDEN.

THE market is abundantly supplied with Vegetables and Flowers. The latter give the market the appearance of an immense flower-garden. The flowers in pots consist of large quantities of *Mignonette*, luxuriant and fragrant; *Geraniums*, *Verbenas*, *Roses*, *Gladiolus*, and *Pinks*. The cut-flowers of the common kinds, are *Geraniums*, *Ranunculus*, *Iris*, *Gladiolus*, *Roses*, *Centaurea*, and *Pinks*. Fruit is becoming more plentiful. *Cherries* from France have been remarkably fine, particularly a large Bigarreau-looking variety, which, when unripe, is pale, and deeply mottled with red, but as it ripens it becomes jet black. We could not ascertain its name. *Peaches* and *Nectarines* are very fine, and well coloured. *Strawberries*, hitherto sold by the ounce, are coming in by the pottle, and if the hot weather continues we shall have them very soon hawked about the streets.

FRUIT.

Apples, kitchen,		Currants	— " —
per bushel	7s. to 12s.	Raspberries	— " —
" dessert, doz.	6d. " 2s.	Strawberries, per	
Pears	— " —	pottle	1s. " 2s.
Apricots, per doz.	— " —	Oranges, per 100	4s. " 10s.
Peaches, per doz.	15s. " 24s.	Lemons, doz...	1s. to 1s. 6d.
Nectarines, doz.	15s. " 24s.	Almonds, per lb..	2s. " —
Cherries, lb.	3s. " 6s.	Nuts, Filberts, lb.	— " —
Plums	— " —	" Cobs, lb.	— " —
Pine-apples, lb...	6s. " 10s.	" Barcelona,	
Grapes, lb.	5s. " 10s.	per bushel	20s. " 22s.
Melons, each	3s. " 8s.	" Brazil, per	
Figs	— " —	bushel	12s. " 14s.
Gooseberries, per		Chestnuts	— " —
half sieve	— " —		

VEGETABLES.

Cabbages, per doz. 9d. to 1s.	Horseradish, per bundle.. 1s. 6d. to 2s. 6d.
“ Red, per doz. 2s. „ 4s.	Lettuce, Cos, per score — „ 1s.
Cauliflowers, doz. 1s. „ 2s. 6d.	“ Cabbage 9d. „ 1s.
Brocoli — „ —	Endive, per score 1s. 6d. „ 2s.
Savoy — „ —	Celery, per bun. 8d. „ 1s. 6d.
Greens — „ —	Radishes, per doz. bunches 4d. „ 6d.
Spinach, per sieve 1s. „ 2s.	Water Cresses, per doz. bunches.. 6d. „ 9d.
Peas — „ —	Small Salad, per punnet 2d. „ 3d.
Beans — „ —	Asparagus, per bundle 2s. „ 4s.
French Beans, per 100..... 9d. „ 1s. 6d.	Sea-kale, per pun. 6d. „ 1s.
Scarlet Runners — „ —	Rhubarb, per bdl. 2d. „ 6d.
Carrots, bunch .. 6d. „ 1s.	Cucumbers, each 3d. „ 1s.
Parsnips — „ —	Vegetable Marrow — „ —
Beet, per doz. 6d. „ 1s. 6d.	Tomatoes — „ —
Potatoes, new, lb. 6d. „ 8d.	Mushrooms, per pottle 8d. „ 1s.
Turnips, bunch .. 2d. „ 1s.	
Onions, young, bunch..... 1d. „ 2d.	
Leeks, per bunch 2d. „ 6d.	
Garlic, per lb. .. 6d. „ 8d.	
Shallots, per lb. 4d. „ 6d.	

HERBS.

Basil, per bunch 6d. to 9d.	Savory, per bunch 2d. to 3d.
Marjoram, per bunch 6d. „ 9d.	Thyme, per bunch 2d. „ 3d.
Fennel, per bunch 2d. „ 3d.	Parsley, per bunch 2d. „ 3d.
	Mint, per bunch 4d. „ 6d.

POTATOES.

Regent's, York, per ton 120s. to 180s.	Regent's, Scotch, per ton 110s. to 130s.
„ Kent and Essex 120s. „ 150s.	Scotch Reds.. 120s. „ 140s.
„ Lincoln 120s. „ 150s.	„ Blues 90s. „ 100s.

GRAIN AND SEED.

WHEAT.

Kent and Essex, red, per qr. .. 68s. to 76s.
Ditto, white.... 75s. „ 88s.
Norfolk and Suffolk 70s. „ 78s.
Dantzic 80s. „ 88s.
Rostock 78s. „ 89s.
Odessa..... 70s. „ 75s.
American..... 80s. „ 85s.

BARLEY.

Malting 82s. to 83s.
Grinding and Distilling.... 31s. „ 33s.
Chevalier 34s. „ 36s.

OATS.

Scotch, feed .. 30s. to 34s.
English 26s. „ 30s.
Irish 25s. „ 28s.
Dutch Broo .. 29s. „ 30s.
Danish 27s. „ 29s.
Russian 28s. „ 30s.

BEANS.

Harrico 39s. to 43s.
Pigeon 41s. „ 47s.

HOPS.

Mid & E. Kent £14 to £18	Sussex £12 to £13
Weald of Kent £13 to £15	

HAY AND STRAW.

Clover, 1st cut per load 90s. to 130s.	Rowan — to —
Ditto, 2nd cut 90s. „ 120s.	Straw, flail 30s. „ 36s.
Meadow Hay .. 90s. „ 115s.	Ditto, machine 28s. „ 32s.

MEAT.

Beef, inferior, per 8 lbs. 3s. to 3s. 4d.	Mutton, mid. 3s. 6d. to 4s. 2d.
Do. mid. .. 3s. 6d. to 3s. 8d.	Do. prime .. 4s. 4d. to 4s. 8d.
Do. prime.... 3s. 10d. to 4s.	Veal 3s. 10d. to 4s. 8d.
Mutton, inferior 3s. 2d. to 3s. 4d.	Lamb 4s. 8d. to 6s.
	Pork, large 3s. 4d. to 3s. 8d.
	Ditto, small 3s. 10d. to 4s. 4d.

POULTRY.

Goslings 5s. to 6s. 6d.	Ducklings 2s. 6d. to 3s. 6d.
Fowls 2s. „ 3s. 6d.	Pigeons .. 0s. 6d. „ 0s. 8d.
Capons.. 3s. 6d. „ 5s. 0d.	Rabbits .. 1s. 0d. „ 1s. 6d.
Chicken .. 1s. 9d. „ 2s. 6d.	

PROVISIONS.

BUTTER.—Cwt.	CHEESE.—Cwt.
Dorset, fine.... 94s. to 96s.	Cheshire, fine .. 70s. to 80s.
Do. middling .. 80s. „ 86s.	Gloucestershire, double 60s. „ 70s.
Fresh, per doz. lbs. 8s. „ 12s.	Ditto, single.... 58s. „ 68s.
Friesland 88s. „ 92s.	Somerset 60s. „ 74s.
Kiel 90s. „ 94s.	Wilts, loaf 63s. „ 74s.
Carlow 90s. „ 100s.	Ditto, double .. 60s. „ 68s.
Waterford 88s. „ 94s.	Ditto, thin 54s. „ 64s.
Cork 84s. „ 86s.	Ditto, pines... 72s. „ —
Limerick — „ —	Berkeley, thin .. 62s. „ 66s.
Sligo — „ —	

BACON.—Cwt.

Wiltshire, dried 74s. to 78s.	York, new 78s. to 82s.
Waterford 68s. „ 70s.	Westmoreland.. 78s. „ 80s.
	Irish..... 68s. „ 76s.

WOOL.

Down Tegs .. 1s. to 1s. 1d.	Kent Fleeces .. 1s. „ 1s. 1d.
Ditto Tegs and Ewes 1s. „ 1s. 1d.	Leicester, fleeces 1s. „ 1s. 2d.
Half-bred Hogs gets..... 1s. „ 1s. 1d.	Long, heavy do. 11d. „ 1s.
Do. Wethers.. 1s. „ 1s. 0½d.	Combing skins 11d. „ 1s. 1d.
	Flannel wool.. 1s. „ 1s. 2d.
	Blanket wool 8d. „ 1s. 0d.

TO CORRESPONDENTS.

DAPHNES (B. G.)—You will see some remarks on them to-day by Mr. Fish. Your *Jasmine* will flower earlier in your conservatory.

NAME OF CEDRUS (E. N.)—The shoot you have sent us appears like that of *Cedrus deodora*, but it is not easy to distinguish it. If the tree is of a rigid habit of growth, it is the Cedar of Lebanon; if pendulous, it is the Deodar.

BOOK ON POULTRY (A Subscriber, Morayshire).—Buy “The Poultry Book,” published by Messrs. Orr and Co., Amen Corner. It will give you all the information you need. The N. E. aspect would do better than the limited space you mention for a house.

REMOVING GREASE SPOTS FROM STONE (Idem).—Wash it repeatedly with a strong hot solution of common washing soda. Let some of the solution remain on the spots for some hours, renewing it as often as needed.


WESTWOOD'S BUTTERFLIES (R. Sells).—The new cheap edition concludes with the Appendix and Index. Write to Messrs. Orr, Amen Corner. They will tell you all about it.

LAWN (H. A. S.)—The seeds your ground was sown with were old, and therefore did not vegetate. It too frequently happens that seeds that are sold for Grass-seeds are the sweepings of hay-lofts; and as hay is always made before the seed is ripe, what is got from that source is only chaff. Dig up your ground in the last week of August, and sow it down with seeds in the beginning of September, when the soil is moist, if possible; and take care this time that you get your seeds from a respectable source. You cannot do better than order them from one of the seedsmen who advertise such things in our columns.

NAMES OF PLANTS (Annie).—1. *Sedum oppositifolium*. 2. One of the Club Mosses, in the way *Lycopodium Louisianum*. 3. *Echeveria secunda*. 4. *Escallonia macrophylla*. 5. *Aubrietia purpurea*. 6. *Arabis Alpina*; *Chieranthus Marshallii*, can either be rooted from cuttings, or as soon as it is entirely out of flower it can be taken up and pulled all into bits, and planted anew in new situations, when it will make first-rate flowering bunches for another year. (L. A.)—*Podalyria sericea*. (A correspondent whose name we have lost). *Gesnera Douglasii*.

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WEEKLY CALENDAR.

D M	D W	JULY 10-16, 1855.	WEATHER NEAR LONDON IN 1853.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in Inches.						
10	Tu	Dark-green Fritillary Butterfly.	29.909-29.861	67-51	N.	40	56 a 3	14 a 8	0 43	26	4 56	191
11	W	Queen of Spain Fritillary Butterfly.	29.905-29.864	66-50	N.W.	01	57	13	1 10	27	5 5	192
12	Th	High-brown Fritillary Butterfly.	29.851-29.790	60-46	N.	17	58	12	1 47	28	5 13	193
13	F	Silver-washed Fritillary Butterfly.	29.854-29.774	68-49	S.W.	—	59	11	2 35	29	5 20	194
14	S	Red Admiral Butterfly.	29.924-29.749	65-56	S.W.	02	1v	10	sets.		5 28	195
15	SUN	5 SUNDAY AFTER TRINITY. St.	30.096-29.769	72-47	N.W.	—	2	9	9 a 30	1	5 34	196
16	M	White border Butterfly. [Swithin.	30.122-29.981	77-52	S.W.	—	3	8	9 49	2	5 41	197

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 75.2°, and 51.5°, respectively. The greatest heat, 93.5°, occurred on the 14th, in 1847; and the lowest cold, 38°, on the 10th, in 1851. During the period 124 days were fine, and on 72 rain fell.

RESUMING our notes upon the Plants mentioned in the Holy Scriptures, we come next in the English alphabetical order to the BRIER.

It is quite certain that our translators used this as a comprehensive name to represent several very different plants of which they did not know the true titles, but only that they were armed with thorns or prickles.

One circumstance which is very peculiar in the Scriptures, is that there are always two such plants named in each passage where they are mentioned. This obliged our translators to use two separate terms to mark the distinction, but it is quite uncertain whether they have used them correctly, or, rather, it is certain that they have not.

The distinctive terms made use of by the translators, are "Thorn" and "Briar"—by which they indicate as their opinion, that in the original, a plant with a straight piercing armament, and a plant with a hooked lacerating armament occur in juxta position.

Let us take the first occurring example, that of Judges viii. 7, and there Gideon threatens the insolent princes of Succoth in these words—"I will tear (thresh) your flesh with the thorns of the wilderness, and with *Briars* (Habbarkaneem)." A threat, according to the 16th verse, that he fully executed.

This passage sustains the opinion of our translators; but then arises the question, what plant was really intended by the Hebrew word *Habbarkaneem*? Aquila thought that it was one of the Goat's Thorns, which Rauwolf first described as growing in Syria, and which he called *Tragacantha Syriaca*. It has long, very sharp thorns. Symmachus, another good authority, thought that the Thistle is the *Habbarkaneem*, a diversity of opinion which shows that we must be content with uncertainty.

Next comes the *Chadak* of the Bible, which our translators have rendered Thorn, in *Proverbs* xv. 19, and *Briar*, in *Micah* vii. 4. We know nothing of the plant really intended, but as the Hebrew original is derived from a root signifying "sharpness," we have the intimation that the plant intended was one capable of occasioning great suffering to those upon whom it fell, and it has been well observed, that in the passage in the book of Proverbs there is a beautiful exposition which is lost in our translation—"The narrow way of the slothful is like a perplexed path among Briars, whereas the broad road of the righteous is a high bank." In other words, the course pursued by the righteous is

like a causeway free from obstructions, direct, conspicuous, and open. The course of life of those two characters answers to the above comparisons; the idle man adopts oblique measures, which almost invariably are thorny, to accomplish his purposes; whereas, the honest and diligent man prefers measures the most open and most direct.

The simile in the prophet Micah is not less just. He is complaining of the Prince and of the Judge, who "asketh a reward," observing that "the best of them is a *Briar*," claspng and wounding all with whom it comes in contact.

Next occurs the word *Shamar*, but only in the book of *Isaiah*. Being so exclusively and frequently named by this prophet, we have no doubt that he alluded to some well-known and abundant thorny plant of the country, and such is the genus *Fagonia*. Thus *Fagonia cretica* is found in dry soils exposed to the sun, quite consistent with the prophet's denunciation against the vineyard, when he says—"I will lay it waste: it shall not be pruned nor digged, but there shall come up thorns and *Shamar*: I will also command the clouds that they rain no rain upon it." (v. 6.)

The above species of *Fagonia*, and several others, such as *F. arabica*, *F. persica*, and *F. Olivierii*, all natives of countries bordering on Palestine, are commonly employed for the easy kindling of fires, and must have rendered most forcible to all the prophet's readers the other chapters to which we have referred, in which he warns the Israelites that by God a fire will be kindled which "shall burn and devour his thorns and his *Shamar* in one day."

In the 13th verse of the 55th chapter of the same prophetical book occurs the word *Sirphad*, derived from two Hebrew words signifying "a thorn," and "to spread abroad." The translators of our Version have Englished the sentence thus: "Instead of the *Briar* shall come up the Myrtle tree;" but we have no guide to a closer conclusion respecting the plant intended beyond the derivations we have stated.

Lastly, in the 24th verse of the 28th chapter of the book of Ezekiel, occurs this passage: "There shall be no more a pricking *Briar* unto the house of Israel, nor any grieving thorn." The name translated Brier, is, in the Hebrew, *Silloen*, but we have no reliable guide to a conjecture of the plant referred to by the prophet.

* It occurs in the following chapters of this prophet:—v. 6; vii. 23, 24, 25; ix. 18; x. 17; xxvii. 4; and xxxii. 13.

Dr. Parkhurst only throws out a suggestion as to its probable habit when he says, the Hebrew name "may be derived from *sillah*, to strew on the ground (or, to tread down), and so denote some kind of thorn speedily over-spreading a large surface of ground, perhaps not unlike the Dew-briar." By the "Dew Briar," Dr. Parkhurst meant the *Rubus casius*, the Grey Bramble, or Dew-berry; and it is not at all improbable that the prophet may have referred to the *Rubus sanctus*, or Holy Bramble, a native of Palestine, and which is a prickly trailer, and widely straggling.

It seems that in the British Isles its wise men are from the north. We so say because the only approach to accuracy and fulness obtained by our government, in reply to their enquiries for agricultural statistics, was from Scotland and the West Riding of Yorkshire. Ten out of eleven English counties did not give accurate returns.

Such neglect or refusal to give the statistical information required is very unwise from whatever point of view it is considered. If government do not receive it from the farmers themselves, still the information sought for can be obtained indirectly, and as indirect means are always most liable to error, if the returns show a less amount in the annual produce than the truth, then the farmer is liable, needlessly, to suffer; for the object of such statistical returns is to obtain a guide for the government as to facilitating or checking the supply of corn from abroad.

It is useless to argue that such facilities should not be given, for it is now admitted that a copious supply of food to the community is a consideration paramount to the consideration of any class interest.

Farming is really a manufacture—the producing of food—yet farmers are the only manufacturers who refuse to have all possible information relative to the state of the supply of their particular articles of manufacture. To justify such wish to be in the dark, can any farmer say that he would not be gladdened and benefited by knowing how many thousands of quarters of Wheat, Barley, and Oats there are in the United Kingdom? Would he not regulate his sowings and his sales by such information?

What would farmers say if no returns were published of the quantities of Guano imported? Yet such publication is just as likely to influence the Guano merchant's trade as the publication of the quantity of Wheat grown in each year is likely to influence the trade of the farmer.

HORTICULTURAL SOCIETY'S EXHIBITION.—

JUNE 20th.

CONTINUING my notes from where I concluded at page 234, I come next to the

ORCHIDS.

The display of these was particularly good; and with the exception of one show at the Regent's Park, three

years since, I never saw them placed with so much effect. Orchids are now half lost under the large tent at the Regent's Park, and at the Crystal Palace they crowded them too much for effect, besides being on a plain surface, as it were. The Orchid stages, at Chiswick, are by far the best that have yet been tried for giving them that peculiar charm which all admire. The prominent feature in the Orchids, to-day, was singularly curious, and before the public were admitted no one could help noticing it. This striking effect was from the overflow of *Saccolabiums* and *Aerides*; their long racemes of flowers spread out in front of the plants as regularly, over the whole of the collections, as if the exhibitors concerted together to produce this effect. *Stanhopeas* are gone out of fashion, or rather they are not to be depended on. Although they are, of all others, the easiest to grow, and the surest to flower, their time of flowering is uncertain, and in one week the beauty of the plant, for its flower, is gone for a twelvemonth, therefore not safe to trust to for a show day; whereas, *Phalænopsis*, *Aerides*, *Saccolabiums*, and a few *Dendrobiums*, keep in flower and beauty for months.

There is nothing to report in the progress of the struggle for prizes. Mr. Williams and Mr. Wooly are first and second in COLLECTIONS OF TWENTY PLANTS, as they have been since Mrs. Lawrence and Mr. Rucker retired on their laurels, and Messrs. Veitch and Rollison keep up the spirit for the whole trade.

In the middle COLLECTIONS OF TEN PLANTS there is little change either. Mr. Gedney and Mr. Clark, both from Herts, and Mr. Carson, from Nonsuch Park, near me, took the prizes as usual; and for the smaller trials with SIX PLANTS, we have none but old practitioners,—Mr. Keele, Mr. Ivison, Mr. Dods, Mr. Gedney, and Mr. Green. Mr. Dunsford has appeared again, from Chingsford, in Essex. He, too, used to be successful in this line many years ago.

Although it is but fair that all plants from the Nurseries should be mentioned by name, for the good of the buyer and seller, that is no reason why I should name those of private growers, save in the lump, seeing there must be so much repetition if I do. The Gold Knightian Medal was given for each of the Nursery collections. Mr. Veitch had first, a single specimen of *Aerides affine* with nine spikes of bloom, then the following collection:—*Aerides Fox's Brush*, *Cypripedium barbatum*, *Oncidium pulvinatum*, *Dendrobium Dalhousianum*, *nobile*, and *formosum*, *Vanda insignis*, *teres*, and *tricolor*, *Saccolabium præmorsum*, and two varieties of *guttatum*, *Cœlogyne Lowii*, *Aerides affine*, *Larpenæ* and *odoratum*, *Sobralia macrantha*, *Phalænopsis grandiflora*, *Cattleya Mossiæ* and *citrina*, the latter hanging down from a block, with four blooms on it.

The collection from Messrs. Rollison consisted of *Phalænopsis amabile*, *Aerides affine* and *affine roseum*, a more beautiful and a larger species than the old *affine*; a large *Dendrobium moschatum*, and *calceolaria*, *Cattleya Mossiæ*, *Acklandæ* with five blooms, and *Leopoldi*, which is new to the exhibitions, and a larger edition of *Acklandæ*, at least a good deal like it, but very different; *Aerides crispum*, *Larpenæ* and *odoratum*, *Stanhopea oculata*, the only *Stanhopea* at the show, *Saccolabium guttatum* and its variety, *Brassia brachiata*, *Sobralia macrantha*, *Phalænopsis grandiflora*, *Uropedium Lindeni*, *Odontoglossum hastilabium*, *Sobralia Galeottiana*, and *Cypripedium barbatum*.

Mr. Williams had eleven *Aerides* and *Saccolabiums* out of twenty plants, while Mr. Wooly had only five of them. Mr. Wooly was the richest in kinds of all the exhibitors; and his *Barkeria spectabilis* was never excelled at an exhibition but once, in 1838 or 1839, and that by Mr. Brewster, at that time gardener to Mrs. Wray, of Cheltenham. That plant was sitting on a lot of little sticks, just like a rook's nest, and had nineteen

flower-spikes. This by Mr. Wooly was on much stronger wood, and had ten spikes.

In Mr. Gedney's ten plants, five of them were *Aerides* and *Saccolabiums*, a splendid *Phalenopsis* and *Calanthe masuca*. Mr. Clark's ten had six of them in *Aerides* and *Saccolabiums*. Mr. Carson was more varied in his ten, and had only one *Aerides*, and his plants were large. Mr. Iveson had a variety of *Cattleya Mossie*, from Santa Martha, with the tips highly-coloured all round, and another *Cattleya Mossie alba* with the largest flower ever seen of the kind. Mr. Keele had a *Cattleya citrina* with two yellow flowers, and *Epidendrum verrucosum*, so much like a *Barkeria*. Mr. Dods had *Anguloa Ruckeri* and *Dendrobium aggregatum* as his less seen kinds. The Messrs. Rollison sent a very singular *Dendrobium*, from Amboyna, with clusters of small, light purple flowers, more like those of some *Epidendrum*.

STOVE AND GREENHOUSE PLANTS.

COLLECTIONS OF TWENTY.—This is considered the highest on the list of prizes; the winner is thought as lucky as the winner of the Derby at Epsom, and anybody in the three kingdoms may enter on equal terms for this prize, which is a large Gold Medal of great value; but the value may be had instead if one likes it. Mr. Dods, gardener to Sir John Cathcart, Bart., is now the regular winner of the Chiswick Derby. He and Messrs. Fraser fight for it, with, now and then, some daring spirit besides. Mr. Rhodes, gardener to J. Philpotts, Esq., Stamford Hill, was the third entry this time. I prefer Mr. Dods' system of growing plants to all who went before him; and if he escapes the great fault of exhibiting specimens that have passed the age of manhood, so to speak, he may keep the lead for many years to come. There is now no question that Mrs. Lawrence's sudden downfall was owing to her splitting on this very rock, and there was no other collection in the country which she could buy to make up for her own positive errors of judgment; but now the Messrs. Fraser offer their specimens for sale, as a second bait for the lady to resume her indulgence in beating foes and friends alike. I repeat the warning to Mr. Dods, Mr. Rhodes, and to all whom it may concern, and say, let them remember, that the best plants in the world, and the best gardeners in the world, as well, will never triumph at an exhibition after a certain age, however useful either the one or the other may be thought at home.

Mr. Dods' plants were *Epacris miniata grandiflora*, *Pimelia mirabilis*, *Aphelexis macrantha purpurea*, *Erica Cavendishii*, fine; blue *Leschenaultia*, *Erica depressa*, fine; *Azalea Gledstanesii*, very fine; *Leschenaultia formosa*, *Chorozema illicifolia*, *Polygala cordifolia*, *Vinca alba* and *rosea*, *Boronia serrulata*, *Gompholobium polymorphum*, *Allamanda cathartica*, *Clerodendron Kempferi*, *Aphelexis speciosissima*, *Pimelia Hendersonii*, *Crocea saligna*, and *Azalea lateritia*.

The Messrs. Fraser's plants were *Epacris grandiflora*, *Boronia tetrandra*, *Aphelexis purpurea grandiflora* and *nivea alba*, *Allamanda cathartica*, *Stephanotis floribunda*, *Phænocoma prolifera*, *Vinca oculata*, *Azalea magniflora*, *Erica tricolor elegans*, *Clerodendron Kempferi*, *Eriostemon buxifolium*, *Adenandra fragrans*, *Azalea Prima Donna*, a bright red kind; *Erica tricolor Wilsoni*, *Aphelexis spectabilis*, *Erica matuliflora*, *Dracocephalum gracile*, and *Epacris miniata*.

Mr. Rhodes' plants were *Erica Albertus*, fine, but getting too big; the rest were medium-sized plants:—*Eriostemon*, *Ixora alba*, *Tetratheca verticillata*, *Aphelexis*, two kinds; *Sollya linearis*, *Pimelia Hendersonii*, *Boronia tetrandra*, *Leschenaultia formosa*, *Cyrtoceras reflexa*, *Erica depressa*, *Epacris grandiflora*, *Statice Holfordii*, *Dracocephalum gracile*, *Rondeletia speciosa*, *Sollya*

heterophylla, and a white *Vinca*; altogether, a good assortment of kinds.

For a COLLECTION OF TWELVE PLANTS, Mr. Green was first, with *Allamanda cathartica*, *Ixora coccinea*, *Azalea variegata*, *Echites atropurpurea*, *Aphelexis macrantha*, the light variety; *Erica Cavendishii*, *Epacris miniata grandiflora*, *Rondeletia speciosa*, the largest in the country, and the finest; *Azalea coronata*, my favourite colour; *Polygala Dalmatiana*, *Leschenaultia formosa*, and *Aphelexis purpurea macrantha*; he had also a fine specimen plant of *Erica Cavendishii*.

Mr. Carson followed with *Dipladenia crassinoda*, *Clerodendron splendens*, blue *Leschenaultia*, *Allamanda cathartica*, *Echites atropurpurea*, two *Polygulas*, *Pimelia spectabilis*, and *Erica Cavendishii*.

Mr. Roser, gardener to J. Bradbury, Esq., was third, with *Mitraria coccinea* and *Azalea exquisita*, as his two best; *Chorozema varium*, *Erica ventricosa coccinea*; the rest as those above.

Mr. Cutbush, nurseryman, Barnet, tried the twelve also; his best was *Erica Cavendishii*—not the best grown, but the best-flowered plant of this Heath ever exhibited; *Dipladenia crassinoda*, also, very good; and *Statice Holfordii*.

In COLLECTIONS OF SIX PLANTS there were many competitors, Mr. Dods being first, Mr. Morris second, Mr. Taylor third, and Mr. Pamplin next. The best things among all these were *Erica depressa* and *tricolor Wilsoni*, from Mr. Dods; *Dipladenia crassinoda*, *Azalea Minerva*, and *Aphelexis*, from Mr. Taylor; a fine, well-bloomed *Stephanotis floribunda*, from Mr. Pamplin; *Euphorbia splendens*, a fine old plant; a *Kalosanthus allamanda*, and a white *Vinca*, from Mr. Morris, whose plants were all large, but not too much so.

HEATHS.

Whatever may be the spring which regulates the exhibitor of plants, whether it be a love of plants, or of money, or of fame, or merely a spirit of rivalry, we cannot tell; all these "elements" go to make it up, in many instances; at all events, the judges are the regulators of this spring; and what with firmness, hard criticism, or passing by such plants, or collections of plants, the regulators have done good to the Heath growers, and Heaths will soon be great favourites again, as they most certainly deserve to be, from their great variety and the facility of improving them by cross-breeding. The Messrs. Rollison are pre-eminent in Heaths; they took the first prize for "effect," by their disposition of plants, at the Crystal Palace; therefore, we look to them as leaders of the fashion in staging plants, but here they completely ruined all effect by the way their Heaths were placed; as any one who knows Heaths may understand, when I say, that in the centre of their group was *Cavendishii*, their masterpiece; on the left they placed *elegans* and *propendens*, both dull-coloured; and on the right, *mutabilis* and *ventricosa magnifica*, two of the gayest and richest; one more would have made this centre perfect, to put *elegans* in the place of *mutabilis*, or reverse the two, then *mutabilis*, the highest colour, in front of *propendens*, to help off the dulness of *propendens* and *elegans*, in front of the fine *ventricosa*. It must have been an entire oversight; but we cannot afford to lose an inch in the highest regions of plant management. *Ventricosa*, *coccinea*, *pulchella*, *depressa*, *tricolor*, *flamea*, and *Massoni* were the rest of this group.

Mr. Roser had the second prize with another fine group, of which *florida* was the most out of the common by its looks; its flower is a small, French-white open bell. His *ventricosas* were also very good.

The Messrs. Fraser were the next with *perspicua erecta*, *inflata*, *ventricosa superba*, *rosea*, *alba*, *oblata umbellata*, *tricolor elegans*, *densa*, a greenish-white flower;

Cavendishii, *Savileia major*, with bright rosy bells, like some Scottish Heath of the *Cinerea* breed.

For COLLECTIONS OF SIX HEATHS, the first three prizes were given to Mr. Taylor, Mr. Rhodes, and Mr. Pamplin. Mr. Taylor had *Erica Beaumontia*, *elegans*, *perspicua rosea*, *tricolor*, two sorts, and the rest of more common sorts. *Depressa* and *Cavendishii* were the two best in Mr. Rhodes' collection, and Mr. Pamplin had two *ventricosa*, *depressa*, *Cavendishii*, *princeps*, and *denticulata moschata*, a greenish-white, always in fours close together, and the opening of each flower is as much like the nipple of some little animal as any thing you ever saw.

Altogether, the Heaths were very good.

VARIEGATED PLANTS.

The next great tribe were the Variegated Plants; but who can name or number them? We had established the claims and the effect of variegated plants in the flower-gardens long before we took to them in pots, and they will soon be considered as effective in the rooms and conservatories as flowering plants, and good substitutes for many of the flowering kinds. The next move will be hanging-basket plants, after the Crystal Palace fashion, to hang along the tents, and to let the world see how easily some plants will grow up, or down, under skilful management, but for the present let us stop with variegated plants. Messrs. Veitch, Rollison, and Henderson, of Pine-Apple Place, competed with them in COLLECTIONS OF TWENTY PLANTS each, in which hardy, half-hardy, and stove plants may be put up together, so that if an amateur takes a fancy for such and such a plant for his own greenhouse, and sends to one of these nurserymen for it, the chances are that he will be taken in, that his choice will be a stove plant, or a rock plant, or any plant, but one to suit his greenhouse; but all this will be corrected as we grow older and find out our own faults and the courage to own them, which is, perhaps, after all, the greatest trial of skill.

Mr. Veitch had several variegated *Caladiums*, *Crotons*, *Anætochilids*, *Begonias*, and *Marantas*, all requiring a stove; *Cissus discolor*, a *Pandanus*, or screw Pine; *Vriesia speciosa*, *Aspidistra lurida*, the best of all variegated Orchids; *Coleus Blumei*, a Dragon-tree, and others, all stove plants; and a common *Hydrangea* as variegated as a "Gardener's Garter," an Aloe-leaved *Yucca* the same; and these two would probably stand out-of-doors, like their green parent; with a little extra care in winter.

The Messrs. Rollison sent *Caladiums*, *Crotons*, *Pandanus Javanica*, *Cissus discolor*, *Coleus Blumei*, *Cunna discolor*, *Cypripedium Javanica*, a splendid Pine-Apple, in fruit, and a Dragon-tree, *Stenorhynchus maculatus*, and one or two more that way, but all of them are mostly stove plants.

The Messrs. Henderson sent little plants of the same kinds; but little variegated plants will not tell the beauty of the race. Many plants look excessively pretty in a small state, which are not worth looking at when they grow old. Unless it were a new thing, I would not risk my credit by sending little bits of things to a show; depend upon it, variegated plants will soon have a "run" in the trade, and it is worth while to whet the appetites of monied people, who then cannot hold out against the temptation of buying.

REMARKABLY-LEAVED PLANTS.

The next class of plants are those with remarkable foliage, as *Philodendron pertusum*, *Dragon-trees*, *Pitcher-plants*, and plants with delicate mimosa-like leaves, and then they "drift" into new and rare plants not in bloom. None but nurserymen with good houses and large capital can keep and show such plants; but they are of great interest at a good show. The new upright-

flowering *Gloxinias* are now in great fashion; they will probably be at their best at the July show, and till then it is a pity to disturb them. Collections of *German Irises*, from Mr. Salter and Mr. Gaines; of cut *Rhododendrons*, from the Messrs. Lane and Jackson; of *Pansies*, from Mr. Dobson; of beautiful *Apheleaxis*, from the Messrs. Rollison, who also had the first certificate of merit for a large, handsome *Rhododendron*, called *Duke of Brabant*. This has large trusses of light flowers, and an excellent habit. Mr. Williams, of Orchid notoriety, had a fine collection of *Lycopods* of the closer-growing kinds, which brings me to the

FRUIT-TENT.

The tent for Fruit gives a bad light, and when it is crowded it is very difficult to judge of the different collections; whether it was from that, or from the glare of the plants on my old eyes, I certainly did not admire much of the fruit. Some of the *Grapes* were hardly half ripe; those from Mr. Clements, of Barnet, looked as fine as *Grapes* could be, but they were not half ripe. I once thought that Covent-garden was the worst place in England for good *Grapes*—either not nearly ripe, or too far gone—but this Show was on a par with it, in unripe *Grapes*, at any rate. *Peaches*, *Nectarines*, *Cherries*, and *Strawberries* were very good. *Pine-Apples* were ten years behind the times. *Melons* always look well, but how is the flavour? the judges alone can tell that. Some of the exhibitors of fruit complained to me most bitterly against Mr. Fleming getting a first prize for black *Grapes*, and a prize for a collection of fruit, which, they said, is against the printed rules; but when I came to make inquiry, I found there are two Mr. Flemings in the Duke's family, one of whom lives at Cliefden, near Dropmore; and he was the lucky man, with three bunches of the finest *Black Hamboroughs* that ever were exhibited; and our Mr. Fleming, of Trentham, had the collection prize; but Mr. McEwen had the first and best prize for a collection of fruit.

D. BEATON.

SOYER'S BIVOUAC COOKERY.—I herewith beg to forward you some of the most important receipts which I have concocted out of the soldiers' rations, and which are now adopted in various parts of the camp, and will no doubt shortly be extended to every regiment in the Crimea, having had them plainly printed for circulation throughout the army. Some of the receipts were printed at headquarters and issued for distribution. The reason of my return to Scutari for a short time is to place a civilian cook, who understands his business, in each hospital, which cannot fail to be beneficial to the patients, and by a due organization in those departments, economy will in the end be effected.

I brought with me from head-quarters 12 complete rations as given daily to the troops, and with these provisions I am now teaching ten of those very willing fellows who were previously engaged as cooks in the hospitals the plain way of camp cookery, and, instead of being almost useless, as they were, in so important a branch, they will now turn out, if not the bravest in the army, at least the most wonderful, being able to face both fire and battery when requisite.

Barrack Hospital, Scutari, June 14. A. SOYER.

(Receipt No. 1.)

STEWED SALT BEEF AND PORK A LA OMAR PACHA.

Put into a canteen saucepan about 2lb. of well soaked beef, cut in eight pieces; ½lb. of salt pork, divided in two, and also soaked; ½lb. of rice, or six tablespoonfuls; ½lb. of onions, or four middle-sized ones, peeled and sliced; 2oz. of brown sugar, or one large tablespoonful; ¼oz. of pepper, and five pints of water; simmer gently for three hours, remove the fat from the top, and serve. The first time I

made the above was in Sir John Campbell's camp kitchen, situated on the top of his rocky cavern, facing Sebastopol, near Cathcart's-hill, and among the distinguished pupils I had upon the occasion were Colonel Wyndham, Sir John Campbell, and Dr. Hall, Inspector-General of the Army in the Crimea, and other officers. This dish was much approved at dinner, and is enough for six people, and if the receipt be closely followed you cannot fail to have an excellent food. The London salt meat will require only a four hours' soaking, having been only lightly pickled.

(Receipt No. 2.)

MUTTON SOUP.

Put the rations of six into a pan ($\frac{1}{2}$ lb. of mutton will make a pint of good family soup); 6 lb. of mutton, cut in four or six pieces; $\frac{1}{2}$ lb. of mixed vegetables or 3 oz. of preserved, as compressed vegetables are daily given to the troops; $3\frac{1}{2}$ teaspoonfuls of salt; 1 teaspoonful of sugar, and $\frac{1}{2}$ teaspoonful of pepper, if handy; 6 oz. of barley or rice, or 5 tablespoonfuls of either; 8 pints of water; let it simmer gently for three hours and a-half, remove the fat, and serve. Bread and biscuit may be added in small quantities.

(Receipt No. 3.)

PLAIN PEA SOUP.

Put in a pan 2 lb. of pork, well soaked and cut into eight pieces; pour six quarts of water over; 1 lb. of split peas; 1 teaspoonful of sugar; $\frac{1}{2}$ teaspoonful of pepper; 4 oz. of fresh vegetables, or 2 oz. of preserved, if handy; let it boil gently for two hours, or until the peas are tender. When the pork is rather fat, as is generally the case, wash it only; $\frac{1}{2}$ lb. of broken biscuit may be used for the soup. Salt beef, when rather fat and soaked, may be used for pea soup.

(Receipt No. 4.)

FRENCH BEEF SOUP, OR POT AU FEU (CAMP FASHION).

Put in the kettle 6 lb. of beef, cut into two or three pieces, bones included; 1 lb. of mixed green vegetables, or $\frac{1}{2}$ lb. of preserved, in cakes; 4 teaspoonfuls of salt; if handy 1 teaspoonful of pepper, 1 of sugar, and 3 cloves; and 8 pints of water. Let it boil gently 3 hours; remove some of the fat, and serve. The addition of $1\frac{1}{2}$ lb. of bread, cut into slices, or 1 lb. of broken biscuits, well soaked, will make a very nutritious soup. Skimming is not required.

The three above receipts are applicable to hospitals.

(Receipt No. 5.)

HOW TO STEW FRESH BEEF, PORK, MUTTON, AND VEAL.

Cut or chop 2 lb. of fresh beef into 10 or 12 pieces; put these into a saucepan with $1\frac{1}{2}$ teaspoonful of salt, 1 teaspoonful of sugar, $\frac{1}{2}$ teaspoonful of pepper, 2 middle-sized onions sliced, $\frac{1}{2}$ pint of water. Set on the fire for 10 minutes until forming a thick gravy. Add a good tablespoonful of flour, stir on the fire a few minutes; add a quart and a half of water; let the whole simmer until the meat is tender. Beef will take from two hours and a half to three hours; mutton and pork, about two hours; veal, one hour and a quarter to one hour and a half; onions, sugar, and pepper, if not to be had, must be omitted; it will even then make a good dish; $\frac{1}{2}$ lb. of sliced potatoes or 2 oz. of preserved potatoes; ration vegetables may be added, also a small dumpling.

(Receipt No. 6.)

PLAIN BOILED SALT BEEF.

For six rations, put in a canteen saucepan 6 lb. of well-soaked beef, cut in two, with three quarts of cold water; simmer gently three hours, and serve. About a pound of either carrots, turnips, parsnips, greens or cabbages, or dumplings may be boiled with it.

(Receipt No. 7.)

COSSACKS' PLUMPUDDING.

Put into a basin 1 lb. of flour, $\frac{1}{2}$ lb. of raisins (stoned, if time be allowed), $\frac{1}{2}$ lb. of the fat of salt pork (well washed, cut into small dies, or chopped), two tablespoonfuls of sugar or treacle; add a half pint of water; mix all together; put into a cloth tied tightly; boil for four hours, and serve.

If time will not admit, boil only two hours, though four are preferable. How to spoil the above:—Add anything to it.—(*Times*.)

GARDEN-VISITING.

I INTEND this gossiping article to be more instrumental in bringing out the stores of useful information possessed by others, than for anything I am myself able to communicate. Since writing a short notice on Whittlebury, a correspondent has addressed the Editor, wishing for some information respecting it—the best way or means of reaching it; enquiring what gardens there are worth seeing near it; requesting information how a two days' tour might be most usefully spent, starting from a London station; with some interesting observations on gardening and social economics which may hereafter be alluded to. I regret, that from having travelled so little, comparatively, myself, I am not in a position to take up the case as it ought to be done, and as I have often wished it to be done, with all descriptions given of gardens. Keeping an old proverb in view, it is very probable that the not knowing all the circumstances of the position of celebrated gardens, may infer a sad amount of ignorance and unknowingness on my part, and yet, I must confess, that when I have read a glowing description, and wished to have a chance of seeing the things described with my own eyes, I felt often in about as great a maze how to get there, as if I have been contemplating a journey to the moon. Our friend, Mr. Appleby, from having seen so many places, and from his habit of not merely travelling, but jotting down what he sees, would be able to give some most interesting routes for touring visitors. It would always be an advantage, in the description of a place, to have the nearest town, and the mode of conveyance, rail, or coach, if any, most suitable, and if the latter, the times of running. The difficulty in this latter case, if the coach is in connection with a rail, is that the times are so frequently altered as to be fruitful of disappointments. Where there is a party of four or so, it would not make so much difference, as hiring would not be much more expensive, though few gardeners are able to do much in that way when travelling singly.

I can give but little more information as to getting to Whittlebury. A stranger would require either to hire or take a canter on "*Shank's nagie*," for a couple of hours, from Roade, or Blisworth Station, on the North Western, or from Buckingham Station, which you would reach from Bletchley. My friend, Mr. Gardiner, took me from Roade. *Courteen Hall*, which has been several times alluded to in this work, is about a mile from Roade, and from three to four from Blisworth. Few trains stop at Roade, but most of them, unless expresses, will do so, if you state your desire to the guard before leaving London, at Euston Square.

From Buckingham to Stowe is about four miles, and a delightful walk it is, if you have not to beat double quick time to catch a train in returning, as I have done. Though the gardens and noble mansion are not what they used to be; though fallen from their princely grandeur, there is more than enough of magnificence and picturesque beauty amply to repay a few hours visit to Stowe. I say a few hours, though, if time were no object, half-a-day, or a whole day, would be enjoyed by any one who appreciates fine park scenery. No two demesnes could well be more dissimilar, at present, than Whittlebury and Stowe. The one depending for its effect chiefly on its artistic beauty and fine keeping; the other, on the gorgeousness of massive glades and landscape scenery. I have not walked the distance, but I suspect Whittlebury is four or five miles from Stowe.

I think it necessary to mention this, to prevent any person who should visit Stowe first being disappointed as to the distance. When Mr. Ferguson was setting all established rules at defiance by his penny plants, a friend of our's, wishing to see how his young women gardeners worked, and to judge of the commercial undertaking, paid a visit to Stowe, and was sent, by Mr. Ferguson, to Whittlebury, just as if it had been a hop, step and jump, far less than the "mile and the bittock," and returned to Stowe thoroughly exhausted. Mr. Ferguson, being one of the finest pedestrians I have met with, thinking nothing of a score of miles before breakfast, is naturally apt to judge of the capabilities of other people's legs by his own.

The difficulty of making a two days' tour, with Whittlebury as a central point, or, at least, a principal item in the journey, arises from the fewness of large places in its immediate neighbourhood, and the difficulty of getting at them.

I lately gave an account of *Althorpe*, but the nearest point to that is Weedon, and that, I presume, is some seven miles distant. I have already mentioned *Courteen Hall*; and close to Northampton is *Delapre*, several times mentioned in this work; and there is *Lord Overstone's* splendid place, about five miles from Northampton, where much new work is being done, and some fine ranges of pits erected. Coming back to Northampton again, and taking the rail to Castle Ashby, will bring you within a short distance of the *Marquis of Northampton's*, a fine old place.

The nearest places to Whittlebury, that I am aware of, are close to Towcester. One of these is the demesne of the *Earl of Pomfret*. It is worth visiting by a young man, just for seeing how a departure from a first principle renders many other efforts unsatisfactory. A flower-garden is close to the front of the noble mansion, and it bore traces of having been several times altered, to suit varying tastes, and very likely always with more or less of improvement. As it is, however, it will never be satisfactory, because the starting point is wrong. The noble mansion presents a straight-lined front, and that line requires a similar straight line in the lawn that bounds the gravel in front, instead of the fanciful curves it lately possessed. This would necessitate the re-modelling of the beds; and if they were all removed from the front of such a pile, and transferred to the right, it would be a great improvement. There is a nice mixture of the Arboretum and Pinetum thrown up into mounds, with deep glades between, and these, we were informed, were intended to be filled with water—but that has been departed from—and now, single specimens are dotting the glades, which may ultimately mar the effect. I understood that the primary design was given and so far worked out by Mr. Ferguson.

Another place, close to Towcester, is also well worth visiting. *Elm Lodge* is a new place, the property of — Ridgway, Esq., a wealthy London merchant. The house is finished, and the main works in the grounds are in the course of completion. The house stands rather near the road, but otherwise in a beautiful position. There will be a splendid terrace on the garden-front, over-looking a sloping lawn, fringed with an irregular lake of water, with meadows, &c., in the distance. Mr. Ferguson, of Stowe, has had the laying out of the place, and has displayed great good taste in the forming of the lake—breaking it up into islands, forming romantic grottoes and picturesque mounds, as well as taking the utmost advantage of all specimens and groups of trees that were in the fields, before the place was appropriated to its present use. The forcing-houses and greenhouses are on the same plateau as the mansion; and Mr. Booth, the gardener, has already shown that there will be no want of good cultivation. I noticed here, what is not often to be seen in new places, and

which is worthy of adoption, though there may be something of the professionally selfish in mentioning it, namely, that the proprietor has showed something like true economy in finishing his gardener's house before hardly anything else was completed.

I fear that this information will little suit the wants of our correspondent. Provided two days are all which can be commanded, much would be gained by being able to start the night before, say by the 5.15 P.M., from Euston Station, which would leave you at Blisworth by 8.30 P.M., or, after taking you to Bletchley, would take you by train to Buckingham a little later. This would enable the tourist to start fair the following morning, after a night's rest, and to make inquiries as to conveyances, &c., if any could be got. I should then propose two routes, taking in Whittlebury; first, start with Stowe, then Whittlebury, Elm Lodge, Earl Pomfret's, and find the way to Roade, or Blisworth, calling at Courteen Hall, if the former. If I intended to visit Earl Spencer's, at Althorpe Hall, I would stop at Weedon at night, and start in the morning. If I gave that up, owing to the distance, I would stay at Northampton at night, get out to Overstone in the morning, get back again to Northampton, call at Delapre, and then rail to Castle Ashby, and get back to London by a late train. Suppose I went to Blisworth; I would go to Whittlebury, calling at Lord Pomfret's, and Elm Lodge, and either go on to Stowe, and thence to Buckingham, or return to Blisworth or Roade, leaving out Stowe, and calling at Courteen Hall, if possible. I would prefer taking Stowe on the route, and getting from Buckingham to Winslow junction, and thence on the Oxford line, either to Bicester or Oxford. If I staid at Bicester, I would start early in the morning for Middleton, the seat of the Earl of Jersey, four miles from Bicester; get back again—on to Oxford—see the Botanic Gardens—and thence by rail to Abingdon-road, and up to Nunham; thence back to Oxford, and by a late train to London. By dropping Middleton, and getting to Oxford the over-night, it would be possible to see the Botanic Garden, Nunham, thence get to Oxford, and take rail for Woodstock and Blenheim. No time, however, could be lost, in fact, to get home comfortably. Towcester, Whittlebury, and Stowe, would be sufficient for the first day, and Oxford Botanic and Nunham for the second, provided you wished to get to London in good hours.

There is no end to the variations, even on the same route. Suppose you take Whittlebury and others the first day, you could go to *Woburn Abbey* on a part of the second, by taking the branch line at Bletchley; and that, like Stowe and Nunham, is a place well worthy of some hours' inspection, while Mr. Forbes is well known for his civility to his brother gardeners. Along the same North-Western line is the magnificent new place of *Baron Rothschild*, between Leighton and Berkhamstead; there are the very interesting nurseries of the *Messrs. Lane*, at Berkhamstead; the splendid demesne of *Ashridge Park*, about four miles from the same place; the fine gardens of the *Earl of Clarendon*, near Watford; and the tastefully-laid-out gardens of *Lady Rokeby*, several times so ably described by Mr. Appleby.

Without at all depreciating any of these places, and if it would be possible to leave the night before, say about 5.15, I would decidedly recommend a tour to *Chatsworth* and *Trentham*. It would hardly be possible to manage both easily and comfortably if you left London on Friday morning, at least, nothing else could be seen. By the first train in the morning you would get to Derby, by Rugby and Leicester, a little past nine. By going the night previously to Derby, you could employ the morning in seeing the splendid collection of Coniferae, &c., at the *Earl of Harrington's*, close to the town. Then take the rail to Ambergate, branch rail

from thence to Rowsley, from whence omnibus every hour or oftener to Chatsworth. If economy would prompt you to wait for the Government train in the morning, you will not gain much, as you can go no farther than Rugby, and you will either have to wait a very long time; or take a very dear second-class to Derby, the dearest ever I paid, with the exception of a ride from Cambridge to Hitchin, something like twenty-seven miles, and the fare six shillings and sixpence. If you could leave by a train early enough to get to Chatsworth, or Rowsley, the previous evening, and just getting dark, it would be found very delightful, as the scenery, and the lights in the cottages, perched many of them in most romantic situations all along the Matlock district, would form a fine contrast to the same scenery on the following day when basking in sunshine. Farther on in the season, it would be very difficult to get a bed at Rowsley, or even at Chatsworth, or, properly speaking, the "Chatsworth Arms," in the model village of Edensor, which may be termed the park-village, every house being neat, trim, and beautiful, and the varieties of style as numerous almost as the individual houses. I arrived late at Chatsworth, on my single visit, and after being disappointed in sleeping at Rowsley, got every convenience, fortunately, at the hotel; everything good, and charges moderate. This enabled me and my companion to get into the kitchen-garden a little past six in the morning. On getting back to Derby, it would be advisable, if possible, by means of the North Staffordshire, to get as far as Alton, or Stoke, that night. If to Alton, you might catch a glimpse of the enchanted valley of *Alton Towers*, either that night or early next morning, thence back and round by Uttoxeter, and on to Stoke, and thence to Trentham. There is a nice railway hotel at Stoke. By consulting Bradshaw, wasting no time, these four places may be managed in two-and-a-quarter or two-and-a-half days. By taking the first train in the morning from London both could be managed well, and the Earl of Harrington's (open only on Fridays), but London must be reached rather late. As contrasts to each other, as exhibiting distinctive and great merits, and furnishing the finest specimens of great horticultural skill, that skill, at Trentham especially, triumphing over local difficulties in climate and position, and leaving not a hole nor corner where careful supervision and care are not manifest; these two places ought, at least, to be once seen by every gardener professing a spice of emulation and honourable rivalry, and who can afford the expense; and need I add, that ladies and gentlemen, who are satisfied with the zeal and attention to their wishes and wants which their gardeners exhibit, would not by any means damp that energy for the future, by just slipping the requisite number of guineas into the honest fellow's hand, and telling him he was quite welcome to go to Chatsworth and Trentham at his own convenience. These places, I believe, are open every day, and, of course, gardeners must proclaim their cloth and calling, or they will receive the meagre attention and time bestowed on other visitors, as, among such numbers as go every day, it is impossible to give much attention to all.

If there should be time, in passing from Rugby to Durley, near Kegworth Station there is a new place belonging to—Strutt, Esq., and well worth visiting, chiefly for two things:—The rapidity with which Mr. Mackie, the very intelligent gardener, has clothed the place, giving it already the appearance of age; and the splendid vinery, which has been noticed in these pages, and other contemporary works.

There are other beautiful places belonging to the Messrs. Strutt, and other ladies and gentlemen, near Derby; and if there should be time; there need be no lack of information, as gardeners are extremely obliging in that way.

Though I have seen a good many places, I cannot speak on that subject with the authority of some of my coadjutors. If my impressions should be of any use, after seeing good places in the country, and the finest round London, then I must own, that all things considered, those that come oftenest before my mind's eye, standing out in bold relief, when in a half dreary mood there is time to muse on the recollections of the past, these places are Trentham, Chatsworth, and Nunham.

I do not know whether the above article will be sufficiently interesting. I certainly should not have written it if the correspondent had not given the assurance that such an attempt was much desired by many besides himself. If such a guide is wanted, there will be no lack of information from other sources.

I had some notes of some old places round the Horticultural Society, but as a similar article has appeared, no harm will be done by delaying, or setting them aside. Many places may be seen in a short time, but not without toil, and labour, and expense.

Two things more I would submit, especially for my younger brethren. First, when you visit places always go clean and respectable. In other words, put the best foot foremost, and the best coat on your back. The latter will be an "open sesame;" when, otherwise, you might have a difficulty at the entrance gates. The world will not respect the man who does not respect himself. The second is, in travelling, as a rule, when you want refreshment, or a sleeping room, go to a respectable house; and whether it be professionally right or not, ask for the commercial room. There all charges are uniform and moderate, and the provisions are generally excellent. I recollect when, even more green than now, I and my comrades used to pass a fine house, because we were too humble to enter such a mansion, and got pretty well victimised in some little place that had just a sign dangling over the door. The more respectable the standing of the house, the better and cheaper will be the accommodation.

R. FISH.

THE WONDERFUL SIXPENCE.—On a lovely morning in the month of May, as I was travelling in the neighbourhood of a small town in the county of Salop, I was overtaken by a young man of rather grave countenance, and probably about twenty-five years of age. Happening to be both travelling the same way, we soon fell into conversation about the state of trade, money matters, and other subjects. After we had conversed together a short time on these, he broke out with the following words:—"Well, Sir, I will relate to you an anecdote of a boy who was very well known to my father, to show you what can be done with a very small sum of money. The parents of this boy were so poor, that they could not afford to take more than two scanty meals each a-day. The father, in fact, was not able to earn a livelihood for his family, in consequence of a paralytic stroke, with which he was attacked when the subject of this story was not more than nine years old, so that what little they had to depend upon came wholly from the parish. When the boy was about eleven years of age, a neighbouring farmer one day employed him to assist in driving a few pigs to market, for which he gave him sixpence. The boy on receiving this was so overjoyed that he did not at first know what to do with it; but after considering a short time on the subject, he at last resolved to give it to his parents. When he got home, however, they refused it, saying that, as he had done the work, he had the greatest right to the money. A few days after this, while he was in company with some other boys about his own age, one of them happened to commence talking about rabbits, and told his companions what he had gained by them in the course of last year. This account produced such an effect on

the mind of James Hall (for such was his name), that he was resolved to try what he could gain in the same way. So with his sixpence he purchased two young rabbits, a male and a female, which, when he had kept them a few months, produced four more. Two of those he sold, when they were one month old, for threepence each, so that by this time he had his sixpence again, and four rabbits besides. Next year the produce of his rabbits brought him 15s., with which he purchased a few potatoes, and rented a small piece of land to plant them in. When he had raised his potatoes, he found that he had fifteen bushels, three of which he kept to plant the following year, and the other twelve he sold at the rate of 2s. 6d. per bushel, which with 10s. saved by his rabbits came to £2. The following year he went to service, and gave the rabbits to his parents. He, however, rented a larger piece of land for raising potatoes; this piece yielded him sixty bushels, which he sold at 3s. per bushel, and having saved 10s. out of his wages, he had therefore £9 10s. in his possession. The death of his father, whose funeral expenses cost him £2 10s., reduced his money to £7. In the following year he rented half an acre of land for potatoes, which cost him £3 4s.; this piece yielded him fifty-six bushels, which he disposed of at 3s. per bushel. The amount added to £4 16s. which he had in his hand, and £1 saved out of his wages, came to £30 4s. The next year he lent £20 out at interest, at the rate of five per cent.; with the rest he rented two acres of land, which yielded 312 bushels. The produce he sold at 2s. 6d. per bushel, which, added to the other £20, and its interest, and £1 10s. laid up out of his wages, came to £61 10s. Next year he lent £50, at the same interest as before; with the remainder he rented two acres of land, which produced 320 bushels of potatoes. These he sold at 3s. per bushel, which, added to the £50, and its interest, and £2 laid up out of his wages, came to £102 10s. But having to pay £1 10s. to a man for raising his potatoes, his money was reduced to £101. About this time he left service, married, and rented a small farm, and by constant perseverance and making a right use of his property, he soon became the most opulent farmer in the neighbourhood, and died worth more than £20,000.—*Manchester Spectator*.

CULTURE OF THE PANSY IN POTS.

How should the Pansy be managed to be exhibited in pots? This is a question that I have often been asked; and as I have now here some very good specimens, well-bloomed, and many perfect flowers on each, I opine I can answer that question satisfactorily; so that whoever follows my method will be pretty certain to succeed, and be much gratified with the result. I may venture to assert that there is no other florist flower, usually grown in the open border or bed, that does so well in pots as the Pansy, unless, perhaps, it is the Verbena. In order to obtain fine blooms in a moderate-sized pot the cultivator should procure a rich, light soil. The way I obtained mine was this; I had a considerable quantity of tufts of grass gathered off a field, carted home, and put in the compost-yard; it was laid, in the first place, in a thin layer, about six inches thick; then upon that a layer two or three inches thick of fresh littery dung, just as it came from the stable; upon that, another layer of the turfy tufts of grass was laid; and then another layer of the strawy dung; and so on, till all the turves were collected. This heap was made about last July. It was turned over only once, and is now as fine a compost as possibly can be conceived.

The Pansy plants had been kept singly in 3-inch pots through the winter, in a cold frame, merely

protected from very severe frost, by a covering of littery straw, which was taken off every morning when the weather permitted. Plenty of air was given in mild weather, by either tilting up the lights when heavy rain or snow was falling, or, if fair weather occurred, the lights of the frame were drawn off entirely. By this management, *constantly practised* whenever the weather called for it, the plants grew slowly and stocky, throwing out strong side-shoots. As soon as the spring frosts broke, or rather, I should say, a decided thaw took place, I had the plants taken into the potting shed (and having previously housed a few barrowfuls of the above compost to become dry and a trifle warmed), I had them repotted into 7-inch pots (well-drained), in the aforesaid compost; they were replaced in the frame, and exposed daily whenever the weather would allow. They very soon showed the good effect of the change from the exhausted soil in their small pots to the larger volume of the light, rich compost. It was necessary now to be very cautious in applying water, for if too much was given, which happened in one or two instances, the plants went off, as it is termed, between wind and water; that is, they rotted just at the collar, between the tops and the roots. Warm, gentle showers, in April, were allowed to fall upon them. If any plant had only one stem that preponderated greatly, so as to rob the side-shoots, or overshadow them, such strong gourmands I cut off at once, which relieved the side-shoots, and allowed them to grow all round, and equally strong. As soon as they were long enough, I had the plants brought on to the potting bench, where a small heap of the compost in a rather dry state was ready. A few hooked pegs were also in readiness, and a small-bladed knife, made very sharp. All this was preparatory to layering the side-shoots of the plants. This was done in the usual way; that is, a leaf or two at the part where the incision was to be made were trimmed off; then I took hold of one of the shoots with my left hand, lifted it gently up, bending it a little towards me till I could see clearly the joints; I then placed the edge of the knife a little below the best situated joint, and, drawing the knife upwards, made an incision half-way through the stem, sloping upwards through the joint; I then laid the knife down, and took up a hooked peg, thrusting it into the soil (catching, as it descended, the cut shoot) deep enough into it to bring the layer close to the soil. The next shoot was done in the same way, and so on, till all were layered; care was taken to spread them at equal distances, and one or two weak shoots left uncut to fill up the centre; thin covering of the compost was laid upon the layers, which finished the operation. The plant was then close to the soil, which it almost hid from the sight. Every plant intended for this purpose was operated upon in a similar way, till all were completed; then a gentle shower of water from a fine-rosed pot was given, and the plants were set out under a space covered with hoops, which is what nurserymen term a cradle; there they were placed to have the power of shading and protecting them with mats from hot sun and heavy rains when in bloom.

Scarcely one layer in ten failed, and they all rooted, and by these new roots added vigour to the plants. They grew, and bloomed most profusely, and were the admiration of every one that saw them. The flowers were quite as large as high-coloured; and, I verily believe, more perfect in their several properties than the same kinds managed as well as possible in the open border.

The management, after the layering was performed, consisted in keeping them clear of weeds and duly supplied with soft water. They continue now in full bloom; but, as I wish to increase them, I shall take up the layers, and pot them off separately into small

pots. Indeed, some that I was short of have been done already; these, I anticipate will, by being thus early established, make excellent plants for next year for the same purpose. They will be placed on coal ashes, at a sufficient distance from each other to allow them air and space to form stocky plants; they will make strong, good plants, either to plant out in beds or borders early in the autumn, or for potting in early spring, to bloom in pots, as their parents have done.

I have been, perhaps, somewhat prolix in describing this method of growing this lovely flower to bloom in pots; but I was anxious so to describe it that the veriest tyro in flower-culture may understand how to succeed in growing them.

Layering the Pansy is the very best way of propagating it; it is the quickest and most certain. Layers, in dropping weather, will root in six weeks, and now is the very best time to layer any choice varieties in the beds or borders, and the layers themselves will produce flowers if allowed to remain in the border later in the autumn than they would do if not so operated upon. I have had plants so layered more than a foot in diameter, and close to the ground. So managed in beds in the flower-garden, they continue healthy and longer in bloom than any flower I know.

T. APPELEY.

SUPPOSED METEORIC STONE.—Sir Roderic Murchison announced at the last Meeting of the Royal Society, that the supposed meteoric stone found in the trunk of a tree at Battersea proves to be no more than a piece of manufactured slag, or furnace refuse.

TRITONIA AUREA.

THE GOLDEN TRITONIA.

It is very often a subject of complaint that we have very few plants to ornament the greenhouse or conservatory during the later months of summer, August and September, for instance. Formerly, this was the case. I remember, in my young days, that we had to resort to such things as Balsams, Browallias, Cockscombs, and other annuals. Even the *Campanula pyramidalis*, was cultivated for this purpose. We had no Japanese Lilies, and but few Fuchsias to fill the greenhouse stage and the conservatory border. Now, the case is very different. If the gardener has the means to purchase plants, and labour allowed to grow them properly, the greenhouse, &c., may be kept gay with flowers from January to December. To do this effectually, he will require a considerable-sized cold pit, and a forcing-house, to bring into early bloom such things as Roses, Deutzias, Lilacs, and other forced shrubs; and also forced bulbs, Hyacinths, Tulips, Narcissus, Violets, and Lily of the Valley. All these, however, require a foresight, and a considerable amount of labour and close attention on the part of the gardener, and the employer who requires his houses to be so furnished, should be liberal in allowing means to purchase the plants, the pots they require, and the necessary pit and forcing-house, together with sufficient hands to assist the gardener to manage and bring them to perfection. A very useful book might be written on the subject, and might be named *The Forcing Flower Gardener's Directory*, which would not only direct the operator, but would show his employer what a great amount of means and labour is required to fill the greenhouse and conservatory with flowers all the year, but more especially during the first months of the year.

I set out, however, with stating that the months of August and September are as difficult as any to supply

with flowers in-doors. It is true, we have the noble and gay *Lilium lancifolium*, and its varieties of pure white and spotted flowers; but we need more variety in colour. The plant I have chosen, at this time, to write about supplies flowers of a very bright deep orange. As it is easily cultivated, multiplies freely, and can be kept through winter in any place where the frost cannot reach it, I think it is worthy of being grown in every garden where there is a greenhouse, however small.

HISTORY AND DESCRIPTION.—*Tritonia aurea* is one of the numerous tribe of Cape bulbs. It is separated from the well-known genus *Ixia*, by having its stamens inserted in the tube instead of the base of the petals. It has long, sword-shaped leaves, supported on a stem rising two to three feet high. The flowers are produced on a branching spike, which rises above the foliage. The flowers are large, and of rich orange colour, lasting in bloom through August and part of September. It was introduced from Caffraria, by Mr. Backhouse, of York, in 1848, and is as yet by no means common; though a good blooming bulb may be purchased for 1s. 6d.

SOIL.—The compost that I have found it to grow best in consists of turfy peat, leaf-mould, and sandy loam, well mixed with silver-sand, but not sifted. It should be, when amalgamated together, of a light, porous character, so as to permit the roots to run easily and freely amongst it.

POTTING.—The proper season for this operation is just before the bulbs begin to grow, which generally happens towards the end of February. If delayed till the shoots appear, there will be danger of breaking them off; therefore, in turning out the old ball from the pots, great caution must be used to see if any shoots are commencing to grow. The shoots spring from the sides of the bulbs as well as the crown, and such are exceedingly brittle. Pot them rather deep in the new soil, that is, fully two inches below the surface. If a large specimen is desired, several strong bulbs may be planted in a large pot. I have seen a specimen, in the Botanic Gardens, at Birmingham, managed by my friend, Mr. Catling, the talented curator there, with eight or ten strong bulbs in a pot eleven inches diameter, each producing one or more spikes of flowers, and growing three feet high, forming a truly splendid object. The old soil, as a matter of course, should be done away with, and the bulbs carefully picked out from amongst it.

CULTURE.—As soon as they are potted, give a gentle watering, just to moisten the new compost, and then no more till the shoots appear above the soil, when a second supply may be given. The pots containing the bulbs should be placed in a cold pit, and kept cool and grown slowly—the object being not to force them into bloom too early. Too much heat causes weak shoots and small flowers, besides bringing them into bloom before the natural season. As the plants advance in growth, water may be given oftener, and in greater quantity. The syringe, too, should be used freely, thoroughly wetting the leaves to prevent the increase of the Red Spider, which insect seems very partial to this plant; I have seen the leaves turned quite yellow with its feeding upon the juices; but severe syringing will prevent its increase, and keep the plants green and healthy. As the season advances, the plants may be placed out-of-doors, in a sheltered situation, till the blooms appear. This exposure will be of great benefit to them, causing them to grow more robust, and the rains that may fall will effectually keep down the Red Spider; but in the absence of rain, due supplies of water should be given at the root, and the leaves frequently syringed. By this management, this fine plant may be grown to great perfection. As soon as the first blossoms expand, remove the plants into the

greenhouse, which they will ornament for a long season.

PROPAGATION.—I mentioned above that side-shoots spring from the bulb as well as the central one. These form bulbs, and by them the plants are increased numerously. At the time of potting, separate these small bulbs, and plant them rather thickly in a store pot; grow them the same way as the flowering bulbs, and the second or third year they will flower equally as strong.

T. APPLEBY.

THE SOCIETY OF ARTS held their anniversary dinner this year on the 3rd instant, most appropriately in that triumph of art, the Crystal Palace at Sydenham.

ON THE CAUSES OF FAILURE IN FRUIT-TREES.

HAVING, in a former page, promised to return to the subject of the failure of fruit-trees, I now endeavour to give my version of the causes which tend to that result, as well as some hints likely to remedy that defect. At the same time, I beg most distinctly to state, that although much that I here put forth is supposition, it is based on facts which a fair share of experience and observation has enabled me to collect together.

In the first place, it will be best to go into some of the causes of failure in the bearing of *Peach* and *Nectarine* trees, failures which certainly have been more frequent the last dozen years than in the preceding period. Can this arise from our island receding from the sun? If not, to what other cause can we ascribe the declination of atmospheric heat? This is a point not necessary to enter into here; leaving it, therefore, let us see how much cultivation has to do with the affair.

When *Peach* or *Nectarine* trees are planted against a wall in the accustomed way of supplying them at first with a proportionate quantity of fresh maiden loam, they are supposed to require nothing more for some time; *i. e.*, supposing the rest of the border is good; and I believe, if we would then let them alone for a dozen years or so they would prosper, but the borders on which such trees are planted are the most valuable portions of the garden, and the temptation to plant vegetables and other things on such border is so great, and so often acted upon, as to derange the soil considered so beneficial to the *Peach*. A wall, ten or twelve feet high, has a narrow border at the base of it some eighteen inches wide, then a hard trodden pathway about the same width, then the border, which does service, winter and summer, in the vegetable way, supplied copiously, or otherwise, with manure, as the case may be, to compensate for the loss it sustains from such hard cropping. Now, good dung is an excellent thing as a fertilizer, and I do not know, nor believe, that we shall ever do without it; but there are many things to which it is of more use than to the *Peach*, which, not being a gross feeder, has less need of those juices which dung furnishes than many other plants. However, dung is supposed to be a cure for all evils in the garden, coupled with that of the watering pot; and though both are useful, and a border, relieved of a heavy crop of Peas, Cauliflowers, or Potatoes, will derive much advantage from these applications, yet that benefit can but poorly compensate for the evils these crops have done to the *Peach*-trees. Cold spring water, impregnated, perhaps, with iron, lime, or other mineral matters, is poured on heedlessly on all things that are supposed to want water, and the result often is, as might be expected, a failure.

Now, though I am often, like others, compelled in

practice to crop such borders, and can hardly see how it can be prevented, still I am aware of its evil consequences, which, I conceive, tell at the setting time the next spring, when we are too apt to blame spring frosts and other things; my impression is, that when a tree is in vigorous health—I do not mean a gross or gouty condition—it will resist a much greater amount of frost than is generally supposed; but as we often hear of whole districts being a failure the same season, it is fair to conclude that some atmospheric agency has been at work either in the preceding autumn, or during the time the trees were in bloom in the spring—but most likely the former, for I conceive a favourable summer and autumn, with, of course, certain other conditions, as a not too heavy crop of fruit, proper pruning, &c., to be of infinitely more importance in securing a crop than any amount of protection in the spring months; not but that protection may be of service, but it often receives the credit of securing a crop of fruit when that object would have been effected without it. I, therefore, urge on all who wish to be successful, to attend assiduously to the proper ripening of the wood in early autumn, having, during the summer, secured, as far as possible, a healthy growth, by the destruction of insects, thinning the shoots, and, above all, removing every obstruction (if there be any) between them and that all-important agent, the sun.

Now, it may be asked, how does it happen that trees growing on a dry soil are affected by a wet, cold autumn? To this I apply the same reason as given above—that the season has more influence on the health or welfare of the tree than the situation; and we all know that some dry lands suffer as much in a wet summer as some wet ones do. Nature has kindly endowed her many protegées with the admirable power to accustom themselves, in a certain degree, to the circumstances of their case, that a *Peach*-tree, growing in a damp soil, in a damp season will not suffer so very much more than the one occupying a dry one the same year, other things being the same. Now, as a tree on a dry soil may be too liberally supplied with water, in a natural way, in a wet season, it is reasonable to suppose that withdrawing all the moisture out of the ground, and rich juices, too, by a crop of Peas, Cauliflowers, or Potatoes, and then pouring on huge quantities of cold well-water, can be only a poor way of compensating for the injury done to the *Peach*-tree; and this happening at a time when it has its fruit to swell off and ripen, and its embryo buds for another year to prepare and perfect, we need not wonder at one or the other being indifferently done. Better would it be if the wall border could be devoted to the *Peach* alone, and then we might expect it to flourish, with only such slight cultivation of the surface as might ensure the roots not being meddled with.

Having stated these as being my views in reference to the *Peach*, I may say the same, or nearly so, of other fruits also. Not that they suffer so much from maltreatment in the way of cultivation, but that they are equally sufferers from natural causes. We all know that last autumn was fine, and favoured the well ripening of the tissue of all hard-wooded trees. In addition to that, the crop was not a very heavy one; consequently, the fruit-buds were perfected to a degree they had not been in preceding years; and it is much to that cause that I attribute the present fruitful season. I therefore repeat, that when a good, healthy bud is prepared in the preceding season, the first step towards a crop is effected; and though ulterior causes will have their due weight, still, with all common fruits, where protection and other helps are beyond our reach, this must be of paramount importance.

I may be here allowed to observe, that I regard the *Apricot* as the most tender fruit-tree we have, not but

that its blossoms will stand a great amount of cold; but the tree itself is tender. Perhaps, the best way to secure a greater amount of hardihood, as well as health, would be to cultivate new kinds; for I think those now in general use, as the *Moorpark*, *Brussels*, &c., are wearing out like the old favourite Apples, so that a great boon would be conferred on the gardening world by some one turning their attention to the improvement of this fruit; for while our list of Grapes and Pears extend to a great length, that of Apricots is very meagre, and becoming more so. The growth of the plant is now directed into such irregular channels, that we often see a tree rushing up shoots like hazel rods; while, at others, scarcely adding an inch to its half-barren spurs, thus intimating that it is fast falling into the irregularities which portend an early dissolution, a rapid and gross growth, followed by disease and death, which, though at times averted by the favourable circumstances, is, nevertheless, only postponed.

J. ROBSON.

IGNITING ANTHRACITE COAL.—Nothing is more easy or simple when the *modus operandi* is understood. Place moderate-sized lumps of anthracite on a bed of dry chips, or, better still, of charcoal (shavings do not answer, as they merely flare up and expire before imparting sufficient heat), then pour a table spoonful of oil of turpentine over the anthracite, set fire to the wood or charcoal, and the ignition will not fail.

Having had much experience with Anthracite coal in the United States, and also much trouble with it until shown, in the laboratory of Yale College, the right method of igniting it, perhaps your insertion of this may be useful. Anthracite requires a good draught to make it burn fiercely, but stirring it much invariably puts it out. A fire of anthracite well fed and left to itself burns to a white heat.—C. W. DAY.

ROYAL BOTANIC SOCIETY'S EXHIBITION.—

JULY 4th.

ON Wednesday last the July Exhibition of the Royal Botanic Society was held at the Gardens in Regent's Park, and a finer day could not have been chosen. The Gardens were gay, the grass green, the sky serene, and the flowers fragrant; everything contributed to make this a day to be remembered. The arrangements were excellent; no difficulties experienced in obtaining admission, no applying first at one gate and then to another, and no molestation from the police when we did get in, as was the case at the Crystal Palace. Our ticket told us at what gate we were to enter, and there we did enter without trouble or misgiving. Thanks to Mr. Marnock for his very excellent management. We first proceeded to the marquee; but when we saw the marquee, those who have not seen it cannot form any conception of what it is like. It is an immense covering of canvass, with a roof on the "ridge and furrow" principle, extending over upwards of half-an-acre of ground, with perpendicular sides. The ground is laid out in winding terraces round the sides, which are covered with turf, and in the centre formed into raised clumps, with winding walks between. On these terraces and raised clumps the plants are placed; and the *tout ensemble*, whether regarded from an elevated position looking downwards, or from the centre upwards, is in the highest degree grand. We have never seen a horticultural exhibition where the general effect was so fine; from whatever point of view this magnificent scene was observed, the eye rested on something pleasing, and so harmoniously and artistically was the whole arranged, there was not a single object which appeared to be out of place, or to disturb the general effect. This is, of all others, the place for such an exhibition; and the Crystal Palace, with all its advantages and "capabilities," as old Brown would

have said, will have a hard run before it can match the Royal Botanic.

The plants, generally, were very fine. On entering at the south-east, we had the *Orchidaceous Plants* on our right. Here Messrs. Veitch and Son were conspicuous, as usual, with the first prize for sixteen specimens, all of which were well-grown and noble specimens. Mr. Gedney, gardener to Mrs. Ellis, of Hoddesden, was first for twelve, and Mr. Clark second. For six, Mr. Green, gardener to Sir E. Antrobus, was first, and Mr. Iveson, of Sion, second. And for twenty, Mr. Mylam, gardener to G. Read, Esq., of Burnham, Somerset, carried off the first prize, and C. B. Warner, Esq., of Hoddesden, the second.

The *Stove and Greenhouse Plants* were also very large, well-grown, and well bloomed specimens; and for the collection of sixteen, Mr. Collyer, of Dartford, carried off the extra Gold Medal.

The *Stove and Greenhouse Plants*, and the *Heaths and Fuchsias*, extended all round the upper terraces, and the *Geraniums* occupied the lower banks, forming a perfect blaze, and at the same time a harmony of colour. Away in retired nooks, illustrative of their native shady habitats, were collections of *Exotic and British Ferns*, so relieving the blaze of colour by their lively green and graceful fronds, that one felt quite refreshed and cooled by nearing them.

A large tent, at some distance from the above, and on the south lawn, was appropriated to the *Fruit*, which was the admiration of every one. We heard one Noble Lady remark to another, "This is quite as good as Chiswick." "Quite, I think," replied the other. And so it was—equal to anything of the kind we have ever seen. We counted upwards of sixty *Pines* and thirty-three *Melons*. The *Grapes* were excellent. The *Black Hambros* of Mr. Frost, of Preston Hall, Maidstone, very fine; and the *Mill Hill Hambros* of Mr. Fleming, very large, and well-coloured. The *Cannon Hall Muscats* of Mr. Strahan, gardener to R. B. Hill, Esq., of Bache Hall, Chester, were quite a sight, one bunch measuring about a foot in length, and the berries nearly as large as *Green Gage Plums*; but they were not nearly ripe. The *Dutch Hambros* of Mr. Tillyard, of Heckfield Place, were also very large. The *Peaches* and *Nectarines* were particularly numerous, and very fine. Those which most prominently attracted our attention were the *Violette Hâtive* and *Noblesse Peaches* of Mr. Snow, which were very large and beautiful, as were also the *Royal George* and *Noblesse* of Mr. Howe, gardener to R. Baker, Esq., of Bayfordbury. Unfortunately, many fine specimens, both of *Peaches* and *Nectarines*, were far from being ripe, particularly those of Mr. Turnbull, of Blenheim.

In the *Miscellaneous Collection*, Mr. McEwen, of Arundel Castle, furnished a complete dessert of "fruits of all kinds," composed in all of thirty dishes; among which were *Apples*. These, however, were old; but of this season's growth there were *Jargonelle* and *Summer Franc Réal* *Pears*, *Peaches*, *Nectarines*, *Strawberries*, *Gooseberries*, *Cherries*, *Green Gage Plums*! very large, very fine, and quite ripe; *Oranges*, *Raspberries*, *Melons*, *Figs*, *Hautbois*, &c., &c. Mr. Fleming, of Trentham, had also a very choice and select collection, and though not so numerous as Mr. McEwen's, they were very fine; his *Grapes* were gorgeous, both for size and colour. From the Duke of Northumberland's, at Sion, were dishes of the fruit of the *Nutmeg*, the *Plantain*, the *Vanilla*, and *Momordica*, or *balsamina* the *Balsam Apple* of the East Indies.

Among the *Strawberries* we had the varieties generally in cultivation, and well represented; but the one which attracted our attention most was *Sir Charles Napier*, from Mr. Smith, of Twickenham, which appears to be a very valuable acquisition, the colour being brilliant scarlet, and altogether different from anything we have had since the large *Strawberries* have been introduced.

In this tent were also cut blooms of *Roses* and *Verbenas*; but as we have not space to particularise, we must refer our readers to the Prize List.

About two o'clock the Duchess of Cambridge and Princess Mary, the hereditary Grand Duke of Mecklenburg-Strelitz, and the Duke of Cambridge, made their appearance, and seemed highly gratified with the scene.

About one o'clock the nobility began to arrive, and among the earliest were the Duchess of Sutherland, and the

Duchess of St. Albans, the Marchioness of Aylesbury, the Countesses of Bradford and Chesterfield, together with a long list of other Peers and Peeresses, Ambassadors, and Foreign Ministers. The total number of visitors on that day was upwards of 15,000. This speaks well for the future prospects of the Royal Botanic, which, from its close proximity to town, gives it a great advantage over Chiswick, where, we believe, at the June exhibition there were not more, or little more, than 2000 present.

The following is a list of the prizes awarded:—

Extra Gold.—Mr May, gardener to H. Colyer, Esq., Dartford, for 16 stove and greenhouse plants; Mr Mylam, gardener to G. Read, Esq., Burnham, Somerset, for 20 exotic orchids.

Large Gold.—Mr Barter, gardener to L. Bassett, Esq., of Stamford-hill, for 16 stove and greenhouse plants; Mr Williams, gardener to P. B. Warner, Esq., Hoddesden, for 20 exotic orchids.

Medium Gold.—Mr Green, gardener to Sir E. Antrobus, Cheam, for 16 stove and greenhouse plants; Messrs Fraser, Leyton, Essex, for 12 stove and greenhouse plants; Mr Frost, gardener to E. L. Betts, Esq., Maidstone, Kent, for 10 stove and greenhouse plants; Mr Woolley, gardener to J. B. Kerr, Esq., Cheshunt, for 20 exotic orchids; Messrs Veitch, of Exeter and Chelsea, for 16 exotic orchids; Mr Gedney, gardener to Mrs Ellis, Hoddesden, for 12 exotic orchids.

Gold Medal.—Mr Cutbush, gardener to Mrs C. Barnet, for 12 stove and greenhouse plants; Mr Taylor, gardener to J. Coster, Esq., for 10 stove and greenhouse plants; Messrs Rollison, near Tooting, for 6 Cape heaths; Mr May, gardener to H. Colyer, Esq., Dartford, for 8 Cape heaths; Messrs Veitch, of Exeter and Chelsea, for 20 variegated plants; Mr Clarke, gardener, Hoddesden, for 12 exotic orchids; Mr Turner, Slough, for 12 pelargoniums; Mr Nye, gardener to E. Foster, Esq., Clewer Manor, Windsor, for 12 pelargoniums; Mr M'Ewen, gardener to his Grace the Duke of Norfolk, for a collection of fruit (Arundel).

Large Silver Gilt.—Mr Rhodes, gardener to J. T. Phillpot, Esq., Stamford-hill, for 16 stove and greenhouse plants; Messrs Pamplin, Leyton, Essex, for 12 stove and greenhouse plants; Mr Hamp, gardener to J. Thorne, Esq., South Lambeth, for 10 stove greenhouse plants; Mr Frost, gardener to E. L. Betts, Esq., Maidstone, for 6 stove and greenhouse plants; Mr Taylor, gardener to J. Coster, Streatham, for 6 greenhouse azaleas; Mr Ivison, gardener at Sion House, for 6 exotic orchids; Messrs Fraser, Lea Bridge-road, for 12 pelargoniums; Mr Holders, gardener to the Rev. E. Coleridge, Eton College, for 10 pelargoniums; Mr Fleming, gardener to the Duke of Sutherland, Trentham, for miscellaneous collection of fruit; Mr Tillyard, gardener to the Speaker, Heckfield, for 3 dishes of grapes.

Large Silver.—W. Peed, gardener to Mrs Tredwell, Norwood, for 10 stove greenhouse plants; Mr Williams, gardener to Miss Trail, Bromley, Kent, for 6 stove greenhouse plants; Mr Wiggins, gardener to E. Beak, Esq., Isleworth, for 6 achimenes; Mr Green, gardener to Sir E. Antrobus, Cheam, for 6 tall cacti; Messrs Fraser, Leyton, for 6 Cape heaths; Mr Frost, gardener to E. L. Betts, Esq., Maidstone, for 8 Cape heaths; Mr Roser, gardener to J. Bradbury, Esq., Streatham, for 6 Cape heaths; Messrs Henderson, of Pine-apple-Place, for 20 variegated plants; Messrs Rollison, Tooting, for 20 variegated plants; Mr Green, gardener to Sir E. Antrobus, Cheam, for 6 exotic orchids; Mr Bray, gardener to Baron Goldsmidt, Regent's Park, for 6 fuchsias; Mr Turner, Slough, for 6 fancy pelargoniums; Mr Windsor, gardener to A. Blyth, Esq., of Kiddepoore Hall, for 6 fancy pelargoniums; Mr Turner, Slough, for 6 pelargoniums; Mr Watson, market-gardener, Ealing, for a collection of fruit; Mr Fleming, Trentham, for 4 pine-apples.

IXIAS.

THIS beautiful and attractive genus of bulbous rooted plants was first introduced from its natural habitat, the Cape of Good Hope, in 1757, but has since been much neglected in England, owing to the supposed difficulties attending its cultivation. Too many persons, entertaining a love of, and being connected with, floriculture, fancy that if a seed, root, or plant, is planted in ground, and sufficiently supplied with moisture, it ought to thrive, and put it down as difficult to manage if it does not.

Such an impression, with reference to this particular genus, would easily be removed, by committing to memory the necessary information respecting its natural season of growth, and the particular nature of the soil and situation in which it was originally found growing. The period of its vegetation is during our winter, and its season of blooming, early spring, which makes it necessary that the roots should be planted in the autumn, and that their growth should be protected, so as to secure a successful issue at the blooming season—May and June; whilst at the same time it is desirable, unless the place in which they are planted is perfectly well drained, such as on the brow of a bank, between the interstices of a piece of rockwork, or in the crevices of natural rock, that they should be transplanted annually, as soon as the leaves are decayed, so as to preserve the bulbs from putrefaction, to which they are very liable after the period of blooming is past. The sands, in which they are found growing at the Cape, are so perfectly dry dur-

ing that season of the year, as to be best imitated in an artificial way, by placing the roots in the florists' root and seed drawers, or bagging them, and placing them on a dry shelf.

By taking these precautions, I have never experienced much difficulty in the cultivation of these pretty "gems," and I have devoted much time and attention to their culture during the past ten years, but have been amply repaid for it. A clump of *Ixia crateroides* is a gorgeous sight, whilst the bright, golden-orange hue of *Ixia conica* bids flowers, as a whole, defiance to imitate it in tint, and the coppery hues of the varieties *Cuprea*, with the pale sea-green of *viridiflora*, are not produced in any other flowers that I have ever seen. The spikes of the last, with their flowers expanded in the sun, have all the appearance of flowers manufactured from tissue paper, and the contrast of the dark centre on the pale green is very beautiful.

Having just seen the following collection in bloom, and made the following notes, I forward them to you, under the impression that they may be interesting to many of the readers of THE COTTAGE GARDENER. I would add, they may be grown in any light, rich soil, by planting them four inches deep, in the months of October and November, and protecting them during the winter months. I do not think, from the experience I have had, that it would be well to plant them before, as it excites them to earlier growth, and renders them the more susceptible of being injured by frost, and, consequently, more difficult to protect. A warm, sunny exposition is decidedly the best, as the flowers expand and look most gay when the sun is upon them. They are also adapted to pot culture, and should be planted, three or four roots, in a No. 60, or three-inch pot, and kept plunged in ashes or saw-dust, or a mixture of both, during the winter months, shifted into No. 32's, or six-inch pots, with a little rotted manure immediately over the crocks, in the first week of March, and placed on a gentle bottom-heat, so as to excite their growth and start them into bloom. Care must be taken to give them abundance of air in dry weather. With this care, success has and will be secured in the cultivation of one of the most elegant, showy, and attractive of the genera of bulbous-rooted plants ever known or grown in the kingdom. The varieties I have just seen are as follows:—

Ixia aulica; rosy-yellow; growing two feet high.

I. capillaris; lavender-rose-colour; growing two feet high.

I. conica; beautiful bright orange; one foot high, and a very early bloomer.

I. crateroides; a very early bloomer; bright crimson-scarlet; very showy and pretty; growing but fifteen inches high.

I. cuprea capitata; copper-coloured, with dark centre; dwarf in habit; a large trusser, and a profuse bloomer.

I. cuprea exaltata; richer in colour than the last, grows taller, is branchy, and a very free bloomer.

I. elegans; white, with rosy centre; tall, light, and elegant.

I. erecta; pure white; grows two feet high; is erect and handsome.

I. flexuosa; pale lavender-colour; tall-growing, but very loose in its habit; a late bloomer.

I. lilacina; lilac, with dark centre; grows eighteen inches high, and blooms freely.

I. lilacina ramosa; resembles the last in colour, but is branchy in its habit, and grows taller.

I. lilacina Sarniensis; purplish-lilac; grows eighteen inches high, and is a very abundant bloomer.

I. linearis; white; a tall-grower; is light and elegant in its style of growth.

I. longiflora; buff colour; dwarf in habit, and late-flowering. Derives its name from the peculiar length of the tube; is synonymous with *Tritonia longiflora*.

I. longiflora hybrida; beautiful porcelain-like rosy-white; a branched and abundant bloomer; late flowering.

I. longiflora purpurea; like the last, but the colouring is purple instead of rose.

I. longiflora rosea; similar in style of growth to *longiflora*, but rose-colour.

I. maculata suprema; buff or nankeen-buff, with crimson centre, and crimson tips to petals; grows but fifteen inches

high; is a large trusser, and a profuse bloomer; very beautiful.

I. mutabilis; white, changing to pink, with crimson centre.

I. ochroleuca; lemon-colour, with dark centre; large star-like flowers; a dwarf grower, and a free bloomer.

I. purpurea campanulata; beautiful, large, purple campanulate flowers; very showy; grows eighteen inches high; a free and early bloomer.

I. purpurea capitata; purple, capitate, and free bloomer; is later than the last.

I. racemosa; lilac, with dark centre; a late bloomer.

I. rosea; pretty delicate rose-colour; grows twenty inches high.

I. rosea maculata; rose-colour, with dark centre; grows the same height as the last, and is light and pretty in its style of growth.

I. sanguinea; bright golden-yellow, with blood-coloured centre; dwarf and stiff in its habit of growth; late flowering, and very showy.

I. stellata; tall-growing; purple. A star-like flower.

I. sulphurea maculata; bright yellow, with very dark centre; a large flower, but dwarf and loose in its habit.

I. tricolor capitata; a pretty combination of rosy-white, yellow, and black; grows but twelve inches high, and is very showy.

I. viridescens; a tall growing variety; of a pale green colour.

I. viridiflora; beautiful sea-green flower, with black centre; tall and erect in its habit; late in its season of blooming, but very showy and attractive.

I. viridiflora grandiflora; larger flower, and deeper in colour than the last.

I would not venture to vouch for the botanical correctness of all these names, but as they are local, and more or less descriptive of some marked peculiarity in the variety named, I take for granted they are sufficiently correct for publication. There are several amateurs in the Channel Islands who amuse themselves by cultivating these pretty tribes of bulbs, and each one arrogates to himself the right of calling his seedlings by whatever names he pleases, until some eminent botanist takes the matter up, and sets us right as to their nomenclature. Until then, we must rest satisfied to employ them as they are.—C. B. S., Jersey.

WINDSOR POULTRY EXHIBITION.

THE above took place on the 27th, 28th, and the 29th of June, under patronage that has rarely been equalled; and the entries were more than 600 pens, selected from the yards of most of the reputed breeders in the kingdom. Among the competitors were many hitherto unknown in the poultry-world, and we can truly say of the collection generally, that though, as the natural consequence of fast-approaching moult, some of the leading pens of *adult* poultry were scarcely in the feather and condition that an experienced amateur could desire, the close rivalry that prevailed in the principal classes has never been excelled, and the honours of the winning pens, in not a few instances, were only with considerable difficulty secured; indeed, the very close competition that generally prevailed throughout was the theme of universal congratulation. This may be with confidence attributed, not only to the very liberal prize-list, but also to the high standing of the promoters of this meeting.

His Royal Highness Prince Albert was not only the Patron, but also sent several pens for exhibition; and, we may add, the Committee had used great exertions to ensure the welfare of the valuable description of stock entrusted to them.

Among the plans here adopted was one, the utility of which is beyond all doubt; more especially as regards pens of fowls that have hitherto enjoyed perfect and unrestricted liberty around their native homesteads. Such fowls invariably suffer the most acutely, and immediately, from close confinement; their indisposition arising from the twofold causes of want of exercise (combined with over-excitement), and the absence of their accustomed supply of green food in a growing state.

At Windsor, a turf of grass was daily placed in each pen; and during the whole exhibition it was pleasing to see how busily the inmates were employed, not only in consuming the whole of the blades of grass, but in carefully culling any insectile matter that the soil itself might contain. The poultry, therefore, as a whole, appeared actively employed; there was not that abject moping character that but too frequently much saddens the interest of spectators, and which oft-times tells with fearful prejudice on the future constitution of the birds themselves. The expense, in most localities, will not add very materially to the outgoings of the Committee; and such green food is most especially needed during the extreme heat of Midsummer, whilst the confidence of the exhibitors themselves is much secured by the adoption of this really simple but effective arrangement.

Though Her Majesty's Levee being held on the day of opening might tend, as the managers supposed, to their prejudice as regards numbers, many of the aristocracy were in attendance, from very diverse and distant localities, and the present (though the first) will most assuredly not be the last similar meeting that will take place in this neighbourhood.

The birds were exhibited in a very commodious tent, purposely erected, on some waste ground in Sheet Street, formerly the site of "The Old Mews." In the classes for *Spanish* and *Dorkings*, the first and second prizes, for each variety, fell to the lot of four very superior pens from the stock of H. D. Davies, Esq., of Hounslow. These were descended from the celebrated poultry of Captain Hornby, of Knowsley, and fully supported the fame of their predecessors.

We were much pleased with the appearance of the *Dorkings*, in particular, that took the first premium; for, independently of their marvellously-gigantic size, these fowls did not betray the slightest disposition whatever to coarseness. In rosy-combed *Dorkings* (which these were) this is not frequently the case, and is, therefore (whenever present), a very objectionable feature—the *Dorkings* being altogether a fowl for the purposes of consumption. Here, on very minute inspection, the same delicacy of character was very marked that existed in the single-combed second-prize fowls from the same exhibitor. The rosy-combed birds were very light in colour, but perfect in character; the second-prize fowls were much darker, and lacked weight and bone, compared with their successful rivals. In the *Chicken* we noticed particularly a pen of "commended" fowls, belonging to Mr. Wm. Bromley, of Birmingham. Two of these chicken were, most undoubtedly, the best, whether for size or colour, in the whole class; but their success in prize-taking was entirely thrown away by the introduction of a very truly-bred, but much smaller, *Pullet*, that was evidently several months younger than her more matured companions. In the class for *White Dorkings*, the first-prize birds were far larger than usual, and the whole class were very creditable specimens. These breeds seem to be fast improving. The *Cochins*, generally, were a good deal out of condition, and not a few of the hens had evidently been but just removed from their broods; still, among these were some very excellent poultry, more especially in the classes for white and for partridge-coloured ones. The so-called *Brahma Pootra* class was well filled as to numbers, and the two principal pens were unusually good ones; but the remainder revelled in all that inconsistency of character, whether of comb, feathering, or colour, for which it is of late become so proverbial. In *Game Fowls*, exhibitors cannot possibly be too careful that their pens are rightly entered. We allude to this more particularly, from the circumstance that a very superior pen of *Reds* (No. 230) were disqualified, simply because competing in the ranks of "whites or piles." Had these fowls been in their proper position, the result would have been most certainly in their favour. Another very highly-reputable pen lost position from the want of similarity in the colour of the legs of all the occupants in the trio; whilst not a few were placed *hors de combat* from strange hens being located together for the first time for the purposes of the Windsor exhibition. The whole of the *Game* were unusually good. Perhaps we have not on any former occasion had to record so complete a distribution of prizes, throughout the whole kingdom, as in the *Hamburg* classes; for although, for many years, Lan-

cashire has been the most favoured locality for these beautiful varieties, it could not preserve the mastery on the present occasion. Most of the principal pens were readily disposed of, and it was evident these fowls are fast rising in public estimation, from their consumption of food being but small, whilst their egg-producing properties are scarcely equalled. The *Polands* were good, more especially the White-crested and Silver varieties. The *Sebright Bantams* showed a marked improvement on those lately exhibited; but bad condition was not at all singular throughout the class. The *White Bantams* of the Rev. F. P. Methuen, struck us as particularly beautiful, well-bred specimens. In the class for *any other variety of Bantams* were exhibited a pair of wild Jungle Fowls, the property of His Royal Highness Prince Albert. They were singularly beautiful, but remained perfectly wild and undomesticated. On the approach of visitors they dashed about recklessly, in the hope to regain their much-coveted liberty, and caused many anxious fears in the minds of the Committee for their safety from self-injury. Such, however, was the pugnacity of their character, that immediately any other cock was held near the wire-work, the male bird instantly threw itself into position, and with a rapidity of motion the eye could scarcely follow, struck violently, in the hope of reaching its supposed antagonist. If removed but for an instant, the fowl at once appeared to recover its indomitable desire for freedom; and we are therefore the more pleased to hear they were returned in perfect safety. In the Extra Class were a pen of poultry, recently imported, the property of Mr. H. Higgs, of Southampton, that caused much public interest. They gloried in a name as strangely unusual as was their appearance, viz., "*Ghondook*." They were possessed of large crests, hanging forward, and almost totally hiding the bill, leaving the *back* part of the head plain, as in other fowls. The whole of the plumage was black, and they were rumpless; but as though to compensate for the absence of this usual appendage, they were excessively heavily-booted, and densely feathered on the legs to the very soles of the feet. To add to their general singularity, their walk was as upright as that of the Penguin; and the crow of the male bird was very easily distinguished from that of any other cock in the whole collection. The *Turkeys* were exceedingly good; but the *Geese* and *Ducks* were not at all equal to those that generally compete on such occasions.

The Judges, Mr. John Baily, of London, and Mr. Edward Hewitt, of Birmingham, were severely tested in their powers of discrimination; the great care now so universally taken by exhibitors in breeding, and also in feeding, their poultry, rendering the distinctive merits of rival pens far more closely assimilated than in bygone years. We are informed, however, by one of the Committee, "that the decisions gave general satisfaction."

We will conclude our observations on this meeting by drawing the attention of our readers most particularly to the care and attention that was here paid to the breaking of *all* eggs laid during the exhibition; it is a feature well calculated to inspire confidence in exhibitors, and to which the attention of Committees cannot be too closely devoted, as having the greatest possible influence on the entries of future exhibitions. In short, if combined with a *prompt and due regularity in the return of the poultry to the owners*, a very great step towards its permanency and advancement will have been attained.

The following is the List of Prizes awarded:—

- Class 1.—SPANISH.—13. First prize, H. D. Davies, Esq., Hounslow. 12. Second prize, H. D. Davies, Esq., Hounslow. 3. Third prize, W. Plummer, Esq., Brislington. Highly Commended.—2. Edward Simons, Esq., Birmingham. 4. W. Plummer, Esq., Brislington. Commended. 14. G. Botham, Esq., Wexham Court. (An excellent class.)
- Class 2.—SPANISH CHICKEN.—20. First prize, W. Plummer, Esq., Brislington. 24. Second prize, Parkins Jones, Esq., Fulham.
- Class 3.—DORKINGS (Coloured).—56. First prize, H. D. Davies, Esq., Hounslow. 57. Second prize, H. D. Davies, Esq., Hounslow. 64. Third prize, G. Botham, Esq., Wexham Court. Highly Commended.—25. G. C. Adkins, Esq., Edgbaston. 26. A. H. Leyborne Popham, Esq., Reading. 37. Mrs. H. Fookes, Whitechurch. 37*. Mrs. H. Fookes, Whitechurch. 54. H. G. K. Breavington, Esq., Hounslow. 55. H. G. K. Breavington, Esq., Hounslow. 69. Countess of Chesterfield, Brethby Hall. 70. Countess of Chesterfield, Brethby Hall. Commended.—32. 33. and 34. A. Terry, Esq., Aylesbury. 39. John Fairlie, Esq., Newmarket. 41. G. C. Peters, Esq., Moseley. 44. W. Saunders, Esq., Cowes. (One of the best Classes ever seen.)
- Class 4. DORKINGS (Chicken).—81. First prize, H. D. Davies, Esq.,

Hounslow. 78. Second prize, J. Whittington, jun., Esq., Wootton Waven. Highly Commended.—80. H. D. Davies, Esq., Hounslow. Commended.—74. W. Bromley, Esq., Birmingham. (A meritorious Class.)

Class 5.—DORKINGS (White).—98. First prize, Nathaniel Antill, Esq., Portsea. 106. Second prize, W. Fookes, Esq., Tarrant Monckton. 96. Third prize, F. J. Coleridge, Esq., Ottery St. Mary. Commended.—95. Lady Gilbert East, Maidenhead. 105. J. Jennens, Esq., Moseley.

Class 6.—DORKINGS (White Chicken).—111. First prize, N. Antill, Esq., Portsea. Second prize withheld.

Class 7.—COCHIN-CHINA (Cinnamon and Buff).—114. First prize, Lord de Blaquiere, Petersfield. 140. Second prize, J. Taylor, jun., Esq., Hounslow. 141. Third prize, J. F. Chater, Esq., Haverhill. Highly Commended.—115. Lord de Blaquiere, Petersfield. 118. G. C. Adkins, Esq., Edgbaston. 130. Mrs. H. Fookes, Whitechurch. Commended.—139. Thomas Bridges, Esq., Croydon.

Class 8.—COCHIN-CHINA (Cinnamon and Buff Chicken).—149. First prize, J. Fairlie, Esq., Newmarket. 148. Second prize, J. Fairlie, Esq., Newmarket. Highly Commended.—150. J. Fairlie, Esq., Newmarket. Commended.—151. Mr. G. Dorrell, Slough.

Class 9.—COCHIN-CHINA (Brown, Grouse, and Partridge).—153. First prize, G. C. Adkins, Esq., Edgbaston. 167. Second prize, Rev. G. F. Hodson, North Petherton. 164. Third prize, Thomas Bridges, Esq., Croydon.

Class 10.—COCHIN-CHINA (Brown, Grouse, and Partridge Chicken).—170. First prize, Rev. G. F. Hodson, North Petherton. Second prize withheld.

Class 11.—COCHIN-CHINA (White).—177. First prize, Mrs. S. R. Herbert, Powick. 176. Second prize, R. Chase, Esq., Birmingham. 183. Third prize, G. C. Peters, Esq., Moseley. Commended.—174. G. Lamb, Esq., Tettenhall. 182. G. C. Peters, Esq., Birmingham.

Class 12.—COCHIN-CHINA (White Chicken).—199. First prize, Rev. J. H. Gandy, near Taunton. 193. Second prize, Mrs. S. R. Herbert, Powick. Highly Commended.—192. R. Chase, Esq., Birmingham. 195. J. R. Rodbard, Esq., Langford. 198. G. C. Peters, Esq., Birmingham. (A very good Class.)

Class 13.—GREY SHANGHAE, OR BRAHMA POOTRA.—216. First prize, H. D. Davies, Esq., Hounslow. 217. Second prize, H. D. Davies, Esq., Hounslow. 220. Third prize, R. H. Bush, Esq., near Bath. Commended.—203. G. Cannon, Esq., Great Marlow. 204. E. Simons, Esq., Birmingham. 214. W. Saunders, Esq., Cowes.

Class 14.—GREY SHANGHAE, OR BRAHMA POOTRA CHICKEN.—225. First prize, W. Saunders, Esq., Cowes. 226. Second prize, W. Saunders, Esq., Cowes. Highly Commended.—227. Mrs. E. Payne, Aylesbury. Commended.—228. Miss E. Watts, Hampstead.

Class 15.—GAME FOWL (White and Piles).—244. First prize, J. Avery, Esq., King's Norton. 236. Second prize, James Monsey, Esq., Norwich. 233. Third prize, Joseph Jennens, Esq., Birmingham.

Class 16.—GAME FOWL (Black-breasted and other Reds).—252. First prize, S. Matthew, Esq., Stowmarket. 246. Second prize, G. C. Adkins, Esq., Edgbaston. 263. Third prize, J. Avery, Esq., King's Norton. Highly Commended.—255. F. H. Powell, Esq., Hillingdon. 258. E. Farmer, Esq., Birmingham. Commended.—249. T. W. Pearse, Esq., Bedford. (A good Class.)

Class 17.—GAME FOWLS (Duckwings, Black, Brassy, Greys, &c.).—277. First prize, James Monsey, Esq., Norwich. 275. Second prize, S. Matthew, Esq., Stowmarket. 270. Third prize, H. Wildman, Esq., Birmingham. (The whole Class highly commended.)

Class 18.—HAMBURGH (Golden-pencilled).—289. First prize, John Marshall, Esq., Taunton. 308. Second prize, Thomas P. Mew, Esq., West Cowes. 286. Third prize, James Dixon, Esq., Bradford. Highly Commended.—307. Thomas M'Cann, Esq., Malvern. Commended.—290. W. Taylor, Esq., Ampthill. 294. Rev. F. W. Freeman, near Stowmarket. 300. Mr. W. H. Hill, Birmingham. 306. Daniel Harrison, Esq., Kendal. (A meritorious Class.)

Class 19.—GOLDEN-PENCILLED CHICKEN.—313. First prize, W. Devas, Esq., Old Windsor. Second prize withheld.

Class 20.—HAMBURGH (Golden-spangled).—324. First prize, Master Thompson, Windsor. 317. Second prize, G. C. Adkins, Esq., Edgbaston. 319. Third prize, James Dixon, Esq., Bradford.

Class 21.—GOLDEN-SPANGLED CHICKEN.—328. First prize, Rev. T. L. Fellowes, Acle. Second prize withheld.

Class 22.—HAMBURGH (Silver-pencilled).—329. First prize, Edward Archer, Esq., Malvern. 349. Second prize, Rev. T. L. Fellowes, Acle. 352. Third prize, T. P. Mew, West Cowes. (The Class commended.)

Class 23.—SILVER-PENCILLED HAMBURGH CHICKEN.—357. First prize, W. Taylor, Esq., Ampthill. 360. Second prize, G. Botham, Esq., Wexham Court. (The Class highly commended.)

Class 24.—HAMBURGH (Silver-spangled).—396. First prize, J. B. Chune, Esq., Coalbrookdale. 386. Second prize, F. Edwards, Esq., Bulstrode. 369. Third prize, Jos. Symonds, Esq., Gorwell. Highly Commended.—388. T. B. Wright, Esq., near Birmingham.

Class 25.—HAMBURGH (Silver-spangled Chicken).—405. First prize, R. R. Clayton, Esq., Hedgerley Park. 403. Second prize, M. Symonds, jun., Esq., Milborne St. Andrew. Highly Commended.—401. Rev. H. K. Venn, Honiton. 406. R. R. Clayton, Esq., Hedgerley Park.

Class 26.—POLISH FOWLS (Black with White Crests).—410. First prize, G. C. Adkins, Esq., Edgbaston. 417. Second prize, T. P. Edwards, Esq., Lyndhurst. 423. Third prize, Mr. Thomas Williams, Reading. Commended.—420. F. Edwards, Esq., Bulstrode.

Class 27.—POLISH CHICKEN (Black, with White Crests).—427. First prize, T. P. Edwards, Esq., Lyndhurst. 426. Second prize, E. W. Haslewood, Esq., Bridgnorth.

Class 28.—POLISH FOWLS (Golden).—443. First prize, R. H. Bush, Esq., Bath. 444. Second prize, R. H. Bush, Esq., Bath. 448. Third prize, Parkins Jones, Esq., Fulham.

Class 30.—POLISH FOWLS (Silver).—450. First prize, G. C. Adkins, Esq., Edgbaston. 469. Second prize, Parkins Jones, Esq., Fulham. 455 Third prize, C. E. Coleridge, Esq., Eton College. Highly Commended.—462. Rev. J. H. Gandy, Taunton. (A good Class.)

Class 31.—POLISH SILVER CHICKEN.—477. First prize, C. Edwards, Esq., near Bristol. 474. Second prize, T. P. Edwards, Esq., Lyndhurst.

Class 32.—POLISH (Any other variety).—480. First prize, W. G. Vivian, Esq., Swansea. 484. Second prize, ditto. 490. Third prize, ditto. Highly Commended.—482. H. Churchill, Esq., Gloucester. Commended.—492. W. G. Vivian, Esq., Swansea.

Class 33.—POLISH (Any other variety, Chicken).—494. First prize, C. E. Coleridge, Esq., Eton College. 495. Second prize, Parkins Jones, Esq., Fulham.

Class 34.—ANY OTHER DISTINCT BREED.—498. Prize, Lord De Blaquiére, Petersfield. 511. Prize, H. B. Higgs, Esq., Southampton. 514. Prize, H. D. Davies, Esq., Hounslow. 524. Prize, George Dawes, Esq., Henley-in-Arden. 526. Prize, Miss E. Watts, Hampstead. Commended.—502. C. E. Coleridge, Esq., Eton College. 503. Mrs. Thompson, Windsor. 504. Rev. T. L. Fellowes, Acle.

Class 35.—BANTAMS (Gold or Silver-laced).—534. First prize, Mr. U. Spary, Markyate-street. 532. Second prize, H. Wildman, Esq., Birmingham. Commended.—529. D. Hume, Esq., West Hartlepool.

Class 36.—BANTAMS (Other varieties).—542. First prize, Rev. F. P. Methuen, near Devizes. 546. Second prize, J. R. Rodbard, Esq., Langford. Highly Commended.—554. W. Saunders, Esq., Cowes. 556. H. R. H. Prince Albert.

Class 37.—TURKEYS.—563. First prize, C. Edwards, Esq., near Bristol. 559. Second prize, J. Fairlie, Esq., Newmarket. 558. Highly Commended, J. R. Rodbard, Esq., Langford. (A good Class.)

Class 38.—GESE.—567. First prize, T. P. Edwards, Esq., Lyndhurst. 566. Second prize, J. Fairlie, Esq., Newmarket.

Class 39.—DUCKS (Aylesbury).—584. First prize, H. D. Davies, Esq., Hounslow. 574. Second prize, J. K. Fowler, Esq., Aylesbury.

Class 40.—DUCKS (Rouen).—595. First prize, J. K. Fowler, Esq., Aylesbury. 594. Second prize, ditto.

Class 41.—DUCKS (Other varieties).—603. First prize, C. Edwards, Esq., near Bristol. 609. Second prize, T. C. Moore, Esq., Upton Court.

EXTRA STOCK.—Highly Commended.—613. Miss M. G. Bent, Wexham Lodge. 622. W. A. Warwick, Esq., Colchester. Commended.—616 and 617. R. Cross, Esq., Chippenham Farm.

A SILVER CUP, of the value of Ten Guineas, was awarded to H. D. Davies, Esq., of Spring Grove House, Hounslow, the Exhibitor of the best collection of Adult Birds, being also the most successful competitor in the Adult Classes.

The SILVER CUP, value Five Guineas, was not awarded by the Judges.

EXETER POULTRY EXHIBITION.

AMONG the birds exhibited at the Exeter Poultry Show, on the 28th of June, were several classes of far more than average merit. More especially in respect of the coloured Dorkings, Brown and Partridge Shanghaes, Aylesbury Ducks, and Turkeys, is this expression of praise due to the various exhibitors. Substance, condition, and figure, were all united in the pen of coloured Dorkings to which the first prize was awarded; and if its several birds, individually and collectively, outstripped all competition, many specimens of high merit, especially hens, were shown in adjoining pens. The white Dorkings, as too commonly happens, were but indifferent. Could the hens, however, of the pen to which the second prize was awarded have been shown with the cock in the first-prize pen, there would have been little cause for disapprobation.

Buff and cinnamon Shanghaes were a very fair class, though, as a whole, wretchedly out of condition. Several of Mr. Channing's birds, indeed, left little to be desired in point of either size, figure, or colour. In regard of the latter point, indeed, we have daily cause to rejoice in the more sensible estimate of its importance that is now entertained, for the undue value hitherto ascribed to it has done more harm to the birds than could otherwise have been effected.

The brown and Partridge Shanghaes were eminently good; indeed, there was scarcely among them all a pen devoid of merit. Those, however, belonging to Mr. Hodson were clearly entitled to their post of honour. The chicken of this description deserve the highest commendation.

Mrs. Ford's Aylesbury Ducks carried off first, second, and third prizes; and this success, moreover, was accomplished with competitors of far more than average merit. The first-

prize pen of a drake and two ducks weighed twenty-three-and-a-half pounds; the second, twenty-two-and-a-quarter pounds, although they had been of late to various Exhibitions.

Mr. Barton's Turkeys were among the best-bred specimens we ever beheld: the extreme richness of plumage remarkable in the American variety being here accompanied by most satisfactory size.

Precedence has been given, in the above remarks, to such classes as appeared most deserving of honourable notice. In respect of shortcomings elsewhere, the Windsor Show, it should be remembered, occurring on the same day, must have proved a formidable opponent; and, probably, to this cause must be assigned the absence of better specimens of Spanish, Hamburgs, and Polands, than were submitted to the Judges. The white-crested black birds of the latter variety, however, were highly meritorious. The "Red" Game were not distinguished by particular excellence; but the "Duckwings" were very good. Malays were shown in such wretched condition, that their owners would have acted more wisely in retaining them in their yards till an amendment had been effected in their tattered plumes.

In Bantams, first prizes were justly withheld in both the laced classes; while, with equal propriety, the first honours were awarded to the white and black specimens.

The breeder of Rouen Ducks must be admonished not to forget colour, which should combine with size in the selection of a pen for judicial inspection. The nearer, as respects the first particular, he can approach the colours of the wild duck and mallard in their relative sexes, the greater his chances of success.

The "Pigeons" were decidedly good. Among the best were the prize Fantails, Jacobins, Trumpeters, Owls, Turbits, White Dragons, Bearded and Almond Tumblers.

The exertions of the Committee and their most active and courteous Secretary, Mr. Gray, were aided by weather of the most favourable description—a fortunate occurrence indeed, as all the pens were arranged in the open air, at the side of the Castle Hill, and in the event of rain their inmates must have suffered sadly.

The Reverends Mr. Wingfield, of Gulval, and Mr. Sydenham, of Collumpton, officiated as Judges, having an able colleague in Mr. Piper, of Exeter, for the Pigeons. In more than one class, it will be observed, from the subjoined Prize List, that the power reserved for the Judges, in reference to the withholding a first prize for the want of sufficient merit, was exercised by these gentlemen, reluctantly, no doubt, but on a principle, we are assured, essential to the well-doing of every Poultry Show, and by the disregard of which all their good effects must be speedily obliterated.

Class 1.—SPANISH.—Cock and two Hens.—7 Second prize, Mr James Babbage, Paris-street, Exeter. Age, two years. 9 Third prize, Mrs Brutton J. Ford, Ide, near Exeter. Age, one year.

Class 2.—SPANISH CHICKEN OF 1855.—Pens of Four.—10 Second prize, J. R. Rodbard, Esq., Aldwick Court, Langford, near Bristol. Age, eleven weeks.

Class 3.—DORKING (Coloured).—Cock and two Hens.—16 First prize, J. F. Pearce, Esq., Lower Sleuton, Whimble. Age, thirteen months and three weeks. 14 Second prize, Mrs John Hole, Green End, Plymtree. Age, about eleven months. 13 Third prize, Mr Henry Drew, Peamore, near Exeter. Age, cock and one hen eleven months, one hen two years.

Class 4.—DORKING (White).—Cock and two Hens.—22 Third prize, Francis J. Coleridge, The Mansion House, Ottery St. Mary. Age, above one year.

Class 5.—DORKING CHICKEN OF 1855.—Pen of Four.—30 First prize, Mrs John Hole, Green End, Plymtree. Age, nine weeks. 29 Second prize, Mr Henry Drew, Peamore, near Exeter. Age, eleven weeks. Commended.—26 J. R. Rodbard, Esq., Aldwick Court, Langford, near Bristol. Age, eleven weeks.

Class 6.—CHINA (Cinnamon or Buffs).—Cock and two Hens.—35 First prize, Mr W. L. Channing, Heavitree, near Exeter. Age unknown. 33 Second prize, J. R. Rodbard, Esq., Aldwick Court, Langford, near Bristol. Age, cock fifteen months; hens unknown. 34 Third prize, Mr William Brown, Red Gate, Shute, Devon. Age, hatched in 1854.

Class 7.—CHINA (Brown or Partridge-colour).—Cock and two Hens.—44 First prize, The Rev. G. F. Hodson, North Petherton, near Bridgewater. Age, two years. 47 Second prize, Boughton Kingdon, Esq., Upper Paul-street, Exeter. Age, cock twenty-two months; hens twelve months. 49 Third prize, Mrs Brutton J. Ford, Ide, near Exeter. Age, upwards of one year.

Class 8.—CHINA CHICKEN OF 1855.—Pen of Four.—57 First prize, Boughton Kingdon, Esq., Upper Paul-street, Exeter. Age, four-and-a-half months. 60 Second prize, Henry L. Bean, Esq., Ashcott, near Glastonbury. Age, hatched first week in February. Commended.—50

J. R. Rodbard, Esq., Aldwick Court, Langford, near Bristol. Age, hatched January 15. 52 Samuel Hayman Warren, Esq., Dulverton, Somerset. Age, hatched 24th of March. 58 Boughton Kingdon, Esq., Upper Paul-street, Exeter. Age, four-and-a-half months.

Class 9.—GAME (Black-breasted and other Reds).—Cock and two Hens.—61 Second prize, J. R. Rodbard, Esq., Aldwick Court, Langford, near Bristol. Age, three years. Hens Commended.—62 J. R. Rodbard, Esq., Aldwick Court, Langford, near Bristol. Age, thirteen months. Hens Commended.—63 Dr. Scott, St. Leonard's, near Exeter. Age, eighteen months.

Class 10.—GAME (Duckwings, &c.).—Cock and two Hens.—76 First prize, John H. Amory, Esq., Bolham House, Tiverton. Age, fifteen months. 70 Second prize, J. R. Rodbard, Esq., Aldwick Court, Langford, near Bristol. Age, fourteen months. Hens Commended.—75 John H. Amory, Esq., Bolham House, Tiverton. Age, about two years.

Class 11.—GAME CHICKEN OF 1855.—Pen of Four.—77 First prize, J. R. Rodbard, Esq., Aldwick Court, Langford, near Bristol. Age, eleven weeks. 79 Second prize, J. R. Rodbard, Esq., Aldwick Court, Langford, near Bristol. Age, eleven weeks.

Class 12.—MALAYS.—Cock and two Hens.—82 Second prize, John Buncombe, Esq., Wellington, Somerset. Age, one year.

Class 13.—HAMBURGH (Golden-pencilled).—Cock and two Hens.—84 Second prize, Mr John Westcott, Thorverton. Age, about one year.

Class 14.—HAMBURGH (Golden-spangled).—Cock and two Hens.—87 Second prize, James P. Hine, Esq., Thickthorn, near Ilminster. Age, over nine months. 88 Third prize, Richard Daw, Esq., Mount Radford, near Exeter. Age, one year.

Class 15.—HAMBURGH (Silver-pencilled).—Cock and two Hens.—90 First prize, Thomas Michelmore, jun., Esq., Berry, Totnes. Age, twenty-two months. 93 Mrs. Sophia Martyn, Thorverton Vicarage, near Cullompton. Age, one year. 91 Third prize, Samuel H. Warren, Esq., Dulverton, Somerset. Age, cock and one hen eleven months, one hen two years.

Class 16.—HAMBURGH (Silver-spangled).—Cock and two Hens.—97. Second prize, The Rev. H. K. Venn, Honiton. Age unknown.

Class 17.—POLANDS (Black with White Crests).—Cock and two Hens.—100 First prize, George Smith Fox, Esq., The Court, Wellington. Age, cock ten months; hens hatched in 1854. 98 Second prize, Miss Caroline Quicke, Newton St. Cyres. Age, ten months.

Class 18.—POLANDS (Golden).—Cock and two Hens.—102 Second prize, Charles Edwards, Esq., Brockley Court, near Bristol. Age, exceeding twelve months. 101. Third prize, T. J. Bremridge, Esq., Penrose Villa, Heavitree. Age, fifteen months.

Class 19.—POLANDS (Silver).—Cock and two Hens.—107 First prize, Mrs Brutton J. Ford, Ide, near Exeter. Age, upwards of one year. 105 Second prize, Charles Edwards, Esq., Brockley Court, near Bristol. Age, exceeding twelve months. 108 Third prize, James Turner, Esq., Northbrook, near Exeter. Age unknown.

Class 20.—THOROUGH BREED.—Cock and two Hens.—119 First prize, Mr Thomas Ward, Crediton. (White Spanish). Age, fifteen months. 118 Second prize, George Turner, Esq., Barton, Exminster. (Chittigong.) Age, one year. 116 Third prize, Miss Selina H. Northcote, Upton Pyne. (White Guinea Fowls.) Age, two years. Commended.—110 Mrs Col. Servanté, Hollacombe, Torquay. (Ptarmagan.) Age, one year.

EXTRA STOCK.—119 (b) First prize, Mr W. L. Channing, Heavitree, near Exeter. (White Spanish Chicken.) Age, six weeks. 119 (a) Second prize, Walter Hugo, Esq., Mount Radford, Exeter. (Andalusian Chicken.) Age, ten weeks.

Class 21.—BANTAMS (Gold-laced).—Cock and two Hens.—120 Second prize, The Rev. G. F. Hodson, North Petherton, near Bridgewater. Age, two years.

Class 22.—BANTAMS (Silver-laced).—Cock and two Hens.—125 Second prize, Mr Wm. Connett, 270, High-street, Exeter. Age, eighteen months.

Class 23.—BANTAMS (Any other variety).—Cock and two Hens.—130 First prize, The Rev. G. S. Crews, Crews Morchard House, Tiverton. (Black.) Age, over one year. 127 Second prize, The Rev. G. F. Hodson, North Petherton, near Bridgewater. (White.) Age, three years.

Class 24.—TURKEYS.—Cock and one Hen.—137 First prize, George Turner, Esq., Barton, Exminster. Age, twenty-one months. 135 Second prize, J. R. Rodbard, Esq., Aldwick Court, Langford, near Bristol. Age, thirteen months. 138 Third prize, R. T. Head, Esq., The Briars, Alphonington. (Wild American.) Age, two years.

Class 25.—GESE.—Gander and two Geese.—139 Second prize, Mrs John Hole, Green End, Plymtree. Age unknown.

Class 26.—DUCKS (Aylesbury).—Drake and two Ducks.—145 First prize, Mrs Brutton J. Ford, Ide, near Exeter. Age, upwards of one year. 144 Second prize, Mrs Brutton J. Ford, Ide, near Exeter. Age, upwards of one year. 146 Third prize, Mrs Brutton J. Ford, Ide, near Exeter. Age, upwards of one year.

Class 27.—DUCKS (Rouen).—Drake and two Ducks.—150 Second prize, Charles Ballance, Esq., 5, Mount Terrace, Taunton. Age, over one year. 149 Third prize, Charles Edwards, Esq., Brockley Court, near Bristol. Age, exceeding twelve months.

PIGEONS.

Class 28.—PAIR CARRIERS.—152 First prize, Charles Bluett, Esq., Taunton. Age unknown. Commended.—151 Master Archibald J. Mackey, Fairhill, St. Leonard's. Age unknown.

Class 29.—PAIR ALMOND OR ERMINE TUMBLERS.—154 First prize, Mr W. L. Channing, Heavitree, near Exeter. Age unknown. Highly Commended.—153 Mr W. L. Channing, Heavitree, near Exeter. Age unknown.

Class 30.—PAIR FANTAILS.—162 First prize, Miss Selina H. Northcote, Upton Pyne. Age, two years. Commended.—159 Charles Edwards, Esq., Brockley Court, near Bristol. Age unknown.

Class 31.—PAIR JACOBIANS.—165 First prize, Master Archibald J. Mackey, Fairhill, Mount Radford. Age unknown. Commended.—168 Charles Bluett, Esq., Taunton. Age unknown.

Class 32.—PAIR POUTERS.—172 First prize, Charles Bluett, Esq., Taunton. Age unknown.

Class 33.—PAIR NUNS.—174 First prize, Charles Edwards, Esq., Brockley Court, near Bristol. Age unknown.

Class 34.—PAIR BARBS.—180 First prize, Charles Bluett, Esq., Taunton. Age unknown. Commended.—178 Charles Edwards, Esq., Brockley Court, near Bristol. Age unknown.

Class 35.—PAIR TRUMPETERS.—182 First prize, Charles Bluett, Esq., Taunton. Age unknown. Commended.—181 The Rev. G. F. Hodson, North Petherton, near Bridgewater. Age, one year.

Class 36.—PAIR ARCHANGELS.—183. First prize, Charles Bluett, Esq., Taunton. Age unknown.

Class 37.—PAIR OWLS.—187 First prize, Charles Bluett, Esq., Taunton. Age unknown.

Class 38.—PAIR TURBITS.—189 First prize, Mr W. L. Channing, Heavitree, near Exeter. Age unknown. Commended.—188 Master Archibald J. Mackey, Fairhill, Mount Radford. Age, one year.

EXTRA PIGEONS.—191 (a) First prize, Miss Selina H. Northcote, Upton Pyne. (Pair of Magpie Pigeons.) Age unknown. 192 First prize, Mr W. L. Channing, Heavitree, near Exeter. (Pair of Dragon Pigeons.) Age unknown. 193 First prize, Mr W. L. Channing, Heavitree, near Exeter. (Pair of Yellow Beard Pigeons.) Age unknown.

CERTIFICATE OF MERIT.—199 Mr W. L. Channing, Heavitree, near Exeter. (Cochin-China cock.) Age, ten months.

PRESCOT POULTRY SHOW.

THIS was held on the 4th instant. We will give our report next week.

Judge—Edward Hewitt, Esq., Eden Cottage, Spark Brook, near Birmingham.

Class 1.—SPANISH.—Cock and two Hens.—10 First prize, Mr John S. Henry. 11 Second prize, Mr Thomas Lawrenson, Snig Lane, Prescott. Highly Commended.—9 Mr John S. Henry, Woodlands, Campsall, near Manchester. (An unusually good class.)

Class 2.—SPANISH.—Chicken of 1855.—12 First prize, Miss Pater-son, Knowsley. 13 Second prize, Mr William Copple, Knowsley.

Class 3.—DORKINGS.—Cock and two Hens.—21 First prize, Mr William Wright, West Bank, Widnes. 25 Second prize, Daniel Harrison, Esq., Singleton Park, Kendal. Highly Commended.—15 Miss Pater-son, Knowsley. 22 Mr William Wright. 23 Mr William Wright. Commended.—16 Miss Patterson. 17 Mr John Copple, Eccleston. 18 Mr John Copple. (A very superior class.)

Class 4.—DORKINGS.—Chicken of 1855.—29 First prize, Mr William Wright, West Bank, Widnes. 27 Second prize, Mr John Copple, Eccleston. Highly Commended.—30 Mr William Wright. 34 Miss Pater-son, Knowsley.

Class 5.—COCHIN-CHINA (Buff or Cinnamon).—Cock and two Hens.—43 First prize, Mr Thomas Burnett, Hutton, Preston, Lancashire. 40 Second prize, Mr William Copple. Highly Commended.—14 Mr Thomas Burnett, Hutton, Preston, Lancashire. Commended.—36 Capt. Hornby, Knowsley Cottage. 46 Mr Elias Lyon, Eccleston.

Class 6.—COCHIN-CHINA (White).—Cock and two Hens.—48 First prize, Captain W. H. Snell, St. Swithin's Lane, London. 50 Second prize, Mrs Mary Hurst Wright, West Bank, Widnes.

Class 7.—COCHIN-CHINA.—Chicken of 1855.—54 First prize, Mr Thomas Burnett, Hutton, Preston, Lancashire. 53 Second prize, Mr William Copple. Highly Commended.—52 Mr William Copple, Eccleston.

Class 8.—GAME FOWL (White, Piles, Duckwings, and Blues).—Cock and two Hens.—58 First prize, Mr William W. Brandrit, Halton Road, Runcorn. (Duckwing.) 59 Second prize, Mr Henry Worrall, Knotty Ash House, near Liverpool.

Class 9.—GAME FOWL (Black-breasted and other Reds).—Cock and two Hens.—66 First prize, Mr Samuel Arnold, Eccleston Tile Works. 68 Second prize, Mr James Beesley, Yew Tree Cottage, Prescott. Commended.—63 Captain Hornby, Knowsley Cottage. 65 Mr Henry Worrall, Knotty Ash House. 69 Mr William Pybus, junr., Whiston. 70 Mr Edward B. Jaques, Prescott. (An extraordinary superior class.)

Class 10.—HAMBURGH (Golden-pencilled).—Cock and two Hens.—74 First prize, Mr Robert Cheshire Whiteway, Irwell House, Runcorn. 75 (b) Second prize, W. C. Worrall, Esq., Knotty Ash House. Highly Commended.—75 Daniel Harrison, Esq., Singleton Park, Kendal. 75 (a) W. C. Worrall, Esq., Knotty Ash House. Commended.—73 James F. Greenall, Esq., Grappenhall Hall.

Class 11.—HAMBURGH (Golden-spangled).—Cock and two Hens.—76 First prize, George Fell, Esq., Springfield, Warrington. 80 (b) Second prize, W. C. Worrall, Esq., Knotty Ash House. Highly Com-mended.—80 Thomas West, Esq.

Class 12.—HAMBURGH (Silver-pencilled).—Cock and two Hens.—83 Second prize, James F. Greenall, Esq., Grappenhall Hall. First prize withheld.

Class 13.—HAMBURGH (Silver-spangled).—Cock and two Hens.—90 First prize, Mr Thomas Burnett, Hutton, Preston, Lancashire. 94 Second prize, Mr Francis Worrall, Knotty Ash House.

Class 14.—POLAND FOWL (Black with White Crests).—Cock and two Hens.—101 First prize, Mr William Seddon, Eccleston-street, Prescott. 95 Second prize, Mr Richard Durning, junior, Rainford new brewery. Highly commended.—99 Mr Edward W. Haslewood, Bridgenorth, Shropshire.

Class 15.—POLAND FOWL (Golden).—Cock and two Hens.—103 First prize, James F. Greenhall, Esq., Grappenhall Hall. 105 Second prize, Mr Edward W. Haslewood. Commended.—104 Mr Edward W. Haslewood, Bridgenorth, Shropshire.

Class 16.—POLAND FOWL (Silver).—Cock and Hen.—108 First prize, James F. Greenhall, Esq., Grappenhall Hall. 111 Second prize, Mr Edward W. Haslewood, Shropshire. Commended.—107 James F. Greenhall, Esq., Grappenhall Hall. 110 Mr Edward W. Haslewood, Bridgenorth, Shropshire.

Class 17.—BANTAMS (Gold-laced).—Cock and two Hens.—116 First prize, Gilbert W. Moss, Esq., Liverpool Bank. 119 Second prize, Mr Francis Worrall, Knotty Ash House.

Class 18.—BANTAMS (Silver-laced).—Cock and two Hens.—122 First prize, Gilbert W. Moss, Esq., Liverpool Bank.

Class 19.—BANTAMS (Black).—Cock and two Hens.—123 First prize, Gilbert W. Moss, Esq., Liverpool Bank. 124 Second prize, Gilbert W. Moss, Esq., Liverpool Bank.

Class 22.—BANTAMS (White).—Cock and two Hens.—125 First prize, Gilbert W. Moss, Esq., Liverpool Bank. 126 Second prize, Gilbert W. Moss, Esq., Liverpool Bank.

Class 21.—DUCKS (Aylesbury).—Drake and two Ducks.—132 First prize, Mr Thomas Burnett, Hutton, Preston. 133 Second prize, Mr Thomas Burnett, Hutton, Preston. Commended.—130 Captain Hornby, Knowsley Cottage. 131 Mr Thomas Burnett, Hutton, Preston. (The whole class excellent.)

Class 22.—DUCKS (Rouen).—Drake and two Ducks.—136 First prize, Mr Henry Worrall, Knotty Ash House. 138A W. C. Worrall, Esq., Knotty Ash House. (The whole class commended.)

Class 23.—GESE (Gander and two Geese).—139 First prize, Captain Hornby, Knowsley Cottage. 140 Second prize, John B. Neilson, Esq., Doe Park, Woolton. Commended.—141 Captain Hornby, Knowsley Cottage.

Class 24.—TURKEYS (Turkey Cock and two Hens).—142 First prize, Captain Hornby, Knowsley Cottage. 143 John B. Neilson, Esq., Doe Park, Woolton.

Class 25.—ANY OTHER DISTINCT BREED OF FOWL NOT NAMED.—Cock and two Hens.—144 First prize, G. W. Moss, Esq., Liverpool Bank (Game Bantams). 148 Second prize, Mr E. W. Haslewood, Bridgenorth, Shropshire (Buff Polands). Highly Commended.—145 Captain W. H. Snell, St. Swithin's Lane, London (Partridge Cochinchina). Commended.—149 Mr E. W. Haslewood, Bridgenorth, Shropshire (White Polands).

PIGEONS.—For the best Pair.—1 Prize, Mr Henry Foster, Eccleston. (Silver Beards.) 3 Prize, Mr Henry Foster. (Blue Beards.) 5 Prize, Mr Henry Foster. (Black Balts.) 8 Prize, Mr Francis Worrall, Knotty Ash House. 9 Prize, Mr William Copple, Eccleston. (Blue Runts.) 12 Prize, Mr John Lyon, jun., Vicarage Place, Prescott. 14 Prize, Mr Francis Worrall, Knotty Ash House. (Barbes.) 16 Prize, Mr Francis Worrall, Knotty Ash House. (Almonds.) 17 Prize, Mr Francis Worrall. (Rough Legged Blue.) 19 Prize, Mr William Rigby, Toll Bars, Prescott. (Rough Legged Yellow.) 21 Prize, Mr Francis Worrall. 23 Prize, Mr C. R. Titterton. (Fantails.) 24 Prize, Mr C. R. Titterton. (Silk-lace.) Highly Commended.—2 Mr Henry Foster. (Silver Beards.) 11 Mr Francis Worrall, Knotty Ash House. (Mottlers.) 18 Mr Francis Worrall. (Rough Legged Silver.) 20 Mr Francis Worrall, Knotty Ash House. (Taylors.) Commended.—10 Mr William Halsall, Fall Lane, Prescott. (White Runts.) (The Pigeon class unusually good.)

VEGETABLE CULTURE AND COOKERY.

As you were kind enough to insert my paper on Vinegar in your COTTAGE GARDENER, I am induced to send you another, on a subject which I think will be interesting to many of your readers. In this country, and, indeed, in most countries, everybody is fond of a garden; some derive pleasure in looking upon it, others in cultivating it, and not a few enjoy the products of it. Some cultivate for pleasure, and some for profit; but I often think, as a people, generally, we do not know how to make use of the products of our gardens when we have grown them. On the Continent, how much better they manage these things, and how many simple and wholesome dishes do they not make out of what we, in our ignorance, waste. On the use of vegetables generally, we do not bestow sufficient attention; and if, by communicating what little information I possess on the subject, I can contribute any pleasure or benefit to your readers, I shall feel that my labours have been amply repaid.

I live in one of those quiet and secluded parts of the country, far away from the noise and turmoil of the world,

where no railway has ever penetrated to break in upon the peace and harmony which has reigned for centuries past; and where we jog on in our old way, paying our tithes and taxes and rates, as the collector comes round, just as we would do a part of our every-day duty. It rarely happens that we have any excitement among us, unless it be the occasional committal of some saucy vagrant to the cage, the celebration of a rustic wedding, or our annual Feast, which is held on the village-green. Mr. Goodheart, at the Parsonage; the surgeon, who lives at "the great house;" and I at the Grange, with our families, form "the society" of the place; and what between attending to our several duties, reading the "Times" newspaper and THE COTTAGE GARDENER, which are brought by a postman from a distance of five miles, and cultivating our gardens with good-natured rivalry, we manage to spend our time agreeably and profitably. I, with Philip the gardener and Philip's man, undertake the gardening department; and Mrs. Ashpole, with our daughter, superintend the in-door arrangements, which are conducted by an ancient domestic and her subordinates; and it is the result of our combined experience, and that of our friends, which I intend, with your permission, to communicate to the readers of THE COTTAGE GARDENER, in a series of papers, which I shall designate by the title of "VEGETABLE CULTURE AND COOKERY." Taking the vegetables alphabetically, I shall begin with the

ARTICHOKE.

There are two varieties of the Artichoke; the one called the *Conical*, or *French*, and the other the *Globe*; but the latter is the best for general cultivation. In preparing the soil for this plant, it should be trenched two feet deep and heavily manured. Early in April procure, from some old plants, as many as are requisite of well-rooted offsets, or suckers, when they are about six or nine inches high, and then dibble them out in rows, four feet apart, two feet distant from each other in the rows, and to a depth of four inches in the ground. They must then receive an ample supply of water, which must be continued, from time to time, till they are fully established and begin to grow. During summer, keep the surface between the rows and round the plants well stirred with the hoe, and free from weeds. In August they will begin to form heads, which will be ready for use in September, and continue in use during October and the early part of November. After the heads are cut, the stalks and outside leaves should be removed close to the ground, together with any shoots, or suckers, which may have been produced above ground; but in destroying these, care must be taken not to injure the stock-plant. Before winter sets in, form a ridge round the plants with earth taken from between the rows, but be careful none of the soil enters the heart of the plant: this will strengthen the roots, protect the crown from frost, and prevent the premature production of suckers. If the winter is severe, they should be protected with long litter. Such is the treatment for the first year.

Towards the end of February, or beginning of March, level down the ridges that were formed round the plants before the winter; lay the plants bare without injuring the roots, and remove all shoots, except two, or three at the most, of the strongest. Let these two or three shoots be parted as far from each other as possible, without tearing or injuring them; fill in the earth again, keeping them thus apart, and so leave them for the remainder of the season. The shoots which are removed, if well-rooted, may be used to form new plantations. The established plants will produce heads in June and July, and those planted in spring will produce, as stated above, in August, September, and October, thereby keeping up a succession during the whole of summer and autumn. To have the Artichoke in full perfection, the plants should not be allowed to remain in the ground longer than three years.

To BOIL ARTICHOKE.—Remove the small scales at the bottom, and cut off the ends of all the larger ones. Wash the heads well, and leave them to soak for an hour in cold water. Put them on the fire in boiling water, to which add a little salt and sweet herbs, and when they have boiled an hour, or an hour and a quarter, they will be done; but as this will depend much on the size and age of the heads, the best way to tell when they are sufficiently cooked is to lay

hold of one of the scales, and if it separates easily they are done enough. Before sending them to table, open the scales carefully, and remove the choke, and serve them up with melted butter.

TO FRY ARTICHOKEs.—For this purpose select those that are young and tender; cut them in quarters, and remove the choke and the scales; wash them well, and let them lie an hour in cold water, after which, put them in boiling water, and let them boil till they are quite tender. Prepare a batter, made in the proportion of the yolk of one egg, a large tablespoonful of milk, and a teaspoonful of flour; beat the eggs well before mixing with the milk, and add flour a spoonful at a time; season well with nutmeg, pepper, and salt. Have ready over the fire some fresh butter, or lard, in a frying-pan, and when it has boiled hard, take the artichokes, which should previously be well drained, and dip each piece *twice* into the batter; put them in the frying-pan till they are browned, then drain them and send them to table hot.

TO STEW ARTICHOKEs.—Strip off the scales, remove the choke, and soak them in warm water for two or three hours, changing the water every hour; then put them into a stew-pan, with a piece of butter, rolled in Cayenne pepper and flour; a tea cupful of gravy, and a spoonful or two of catsup, or other sauce; let all stew together till the artichokes are quite tender, and, if necessary, thicken the sauce with a little more butter. Add a spoonful of vinegar, or one of lemon juice, before serving.

ARTICHOKE SALAD.—Take very small and tender artichokes, and, after soaking them, cut them in quarters, and remove the choke. Serve them up in a dish with a little cold water, like radishes; and use them with a dressing of oil, vinegar, pepper, and salt. They have the flavour of nuts, and are very nice.

TO PICKLE ARTICHOKEs.—Boil artichokes till you can pull off all the scales, and thoroughly clear the bottoms, but leave on the choke. When cool, put them into salt and water for an hour, then take them out and put them on a cloth to drain. Put them into wide-mouthed bottles, and pour over them vinegar, in which salt, pepper, mace, and sliced nutmeg have been boiled, but not before it has cooled. Tie the bladder over the bottles.

TO DRY ARTICHOKEs.—Boil the artichokes as for eating; remove the scales and the choke; dry the bottoms upon dishes in an oven, and put them into paper bags, where they will keep all the winter. When they are to be dressed, they are to be laid in warm water for two or three hours; then plain boiled, and eaten with melted butter, or stewed in gravy, with a little mushroom catsup, pepper, and salt; then serve with a little butter rolled in flour. They are a great improvement to all made dishes and meat pies.—
ROGER ASHPOLE.

WINDSOR POULTRY SHOW.

SOME of the decisions were so remarkable, that they gave rise to a great amount of criticism. The third prize in the Silver Spangled Hamburgs was given to one of the worst cock-birds in the Class—the ear-lobe was bright scarlet, without a suspicion of white; and the wings, instead of being barred, were mottled; but possibly some allowance should be made for the peculiar views of Mr. Baily, one of the judges, respecting this variety, as having published his opinion that Spangled Hamburgs are “good mothers,” the prize might have been awarded to the pen in that capacity. The most remarkable decision in the Cochins was in accordance with the peculiar views held by Mr. Baily, that Partridge cocks must have black breasts; the result was, that the third prize was awarded to a leggy, upright, gawky cock, whilst the next pen (163) contained one of the very best birds in the show—a broad, compact, short-legged, magnificent cock, that was not even commended. Both pens came from the same yard, that of T. Bridges, Esq., Croydon. It is to be much regretted if there is even a possibility of the Partridge Cochins being sacrificed to any whims about colour, as the buffs were by breeding, solely for the clear hackle. In fact, these black-breasted cocks are not always pure Partridge, but may be bred at any time from a black hen and a Partridge cock. Among the curiosities shown in the Extra Class was a very common-looking Cochin hen,

and several of her eggs, weighing from five-and-a-quarter to seven ounces each. The owner, Mr. Morgan, of the “Rose and Crown,” Wandsworth, stated that she laid every other day; that none of her eggs were under five ounces, and that they were all single-yolked. As a drawback to their value, it must be stated that they were misshapen and deformed—the extreme size evidently depending on an abnormally enlarged condition of that part of the oviduct which secretes the white membrane and shell.

On the whole, the Show may be stated to have been a very good one, and I believe successful, in a pecuniary point of view; the birds were well looked after and kept clean, and one commendable innovation was the publishing the catalogue at 6d., which I should think would be found as remunerative as if published at a higher price.—
W. B. TEGETMEIER, *Wood Green, Tottenham.*

NOTICES OF BOOKS.

WE have now before us Catalogues from two of the eminent Nurserymen; the first is entitled,

CATALOGUE OF PLANTS, SHRUBS, &c., OFFERED FOR SALE BY HUGH LOW AND Co., Clapton Nursery, London, 1855.

In this pamphlet, which occupies fifty pages of closely-printed matter, we find an enumeration of a very extensive collection of Exotic Plants, for which the Clapton Nursery has been so long celebrated, and to which Mr. Low still applies his numerous resources to extend and maintain. It embraces Stove, Greenhouse, Orchidaceous, Herbaceous, and Alpine Plants, Florists' Flowers, Ornamental and Fruit Trees; and these again are subdivided into Ferns, Azaleas, Camellias, Ericas, Chrysanthemums, Geraniums, Phloxes, Fuchsias, Cinerarias, and Hollyhocks, together with a very complete collection of Coniferæ. Every article has a price attached to it, so that any one intending to become a purchaser can count the cost before giving an order.

The catalogue is stamped to go free by post, and will, no doubt, be forwarded on application being made.

The second to which we have referred is also one of much interest, it is,

A CATALOGUE OF NEW AND CHOICE ORNAMENTAL PLANTS (MOSTLY HARDY) SELECTED FROM THE GENERAL STOCK OF MESSRS. STANDISH AND NOBLE, Bagshot, Surrey, 1855.

It was to this nursery that Mr. Fortune sent home the greater part of his discoveries in China, and when we have said this much, it may be inferred that the contents of the catalogue are both select and valuable. Besides the enumeration of the plants and their prices, the catalogue is interspersed with copious remarks on the most important genera and species, and of the Sikkim Rhododendrons, particularly, there is a very full description of each. Of the varieties of *Pæonia Moutan*, or as they are sometimes called “Fortune's Pæonias,” we find the following:—

“Of the many remarkable plants imported by us from China, these, if judged by the size and beauty of their flowers, are among the most attractive. In the magnitude of their individual blossoms, in the diversity and richness of their colours, as well as in the profusion in which they are produced, nothing remains to be desired. The following sketch will afford an idea of their general characters:—First, of colour: of white there are examples unsurpassed in intensity and clearness by any other flower, not excepting even the old double white Camellia. Of rose-colour there are many shades, as well as of purple, and one rivalling the richness of the Tuscan Rose. Then there is pale blush, light red, deep red, salmon colour, primrose, peach colour, and crimson; with various other tints and combinations of those already mentioned. Some of the light-coloured ones have the basis of their petals deeply stained with red or purple; others are delicately shaded. Most of the flowers are very double; some are, however, only semi-double, the latter generally have the petals stained as described. In shape, many are finely cupped; some resemble the finest Rose, and others have Anemone flowers. Of the last-named, a white and a deep red are fine examples. In size, too, they are remarkable; some of the flowers produced last season, and from small plants, measured eight, ten, and twelve inches across.”

QUERIES AND ANSWERS.

GARDENING.

REMOVING RUNNERS FROM STRAWBERRIES.

"Will you be kind enough to inform me, in your next, whether all runners from Strawberry plants should be cut off while the fruit is ripening?—G. G. HODGSON."

[If your Strawberries are very strong you may go on removing the runners as fast as they appear. Fresh runners will be produced, and the excessive vigour of the plants reduced. If your Strawberries are not strong, peg down the runners into the soil at the earliest time their growth permits. They will root and support themselves if they do not even help the parent.]

A THIEF IN THE CUCUMBER FRAMES.

"I have two two-light frames with Cucumbers (in fruiting), and every flower that comes I find eaten off quite close to the fruit, and the fruit does not swell after it. At first I thought it might be mice, but still I cannot catch any. I tried toads, but the ravages still go on the same, I cannot see anything of the thief.—W. M."

[You have either got beetles or woodlice, and must trap them in the usual ways so often described. Lay a little dry hay by the inner sides of your frames at night, and you will most likely find something under it in the morning.]

DESTROYING THRIPS ON CUCUMBERS.—GROWING IXORA COCCINEA.

"Will you give me your best mode of destroying thrips in Cucumber plants? I have tried Page's Composition, but to no good. The plants are grown in a pit heated by hot-water tanks. I have always syringed them twice a day, but it has little effect on them. I have also a plant of *Ixora coccinea*, about eighteen inches, it grows luxuriantly, but never flowers. A few hints on the best mode of flowering the *Ixora* will oblige me at your earliest convenience.—UN JEUNE HOMME."

[You would see what was said about catching and killing thrips lately. Put a little more size in Mr. Page's Composition. Your treatment is all right.

Grow your *Ixora* now; let it rest in winter, temperature about 50° to 55°, and keep it rather dry, shortening water as the nights lengthen in autumn. In spring, place the plants in a sweet bottom heat, and they will grow and bloom.]

POULTRY.

INFLAMMATION OF THE RUMP GLAND.

"I should be thankful for Mr. Tegetmeier's assistance in my present difficulty. I am losing my Black and White Cocks by a disease which I attribute to following Mr. Tegetmeier's advice in soaking their barley. They are all ill—fourteen in number—as follows. At the root of the tail-feathers, just on the top of the rump, a large, conical-shaped sort of pimple, nearly half-an-inch long, I should say, has sprung up. It runs a deal of yellow matter, though it is not red or inflamed itself. Under the tails of the Cocks, and along their back-bones, there is great redness and inflammation; they are fast losing the use of their legs (one has), and are in a hopeless condition, unless Mr. Tegetmeier can help me.—F. G."

[The disease affecting these fowls is inflammation of the tail, or rump-gland, that secretes the oily fluid used for lubricating the plumage; if many of the birds are affected, it must arise from some cause affecting the whole of them; this cannot possibly be the soaking of the grain. I have soaked the grain for 100 fowls for months, and never had in my own yard a case of inflamed tail-gland; and that the plan is not injurious to Cochins, is proved by the fact that Mr. Gilbert, of Kensington, who was one of the most successful rearers of that variety, invariably soaked the barley given to them, and, certainly, no person took more prizes, or obtained higher prices for their stock. I should recommend a diligent attempt to observe the cause of the disease, which possibly may be found in something that they have eaten.

If any of the birds are sinking on the hocks it must be from muscular weakness; and a little iron, say five grains of the citrate, or one of the sulphate, will be found to strengthen them.—W. B. T.]

LONDON MARKETS.

COVENT GARDEN.

The Market during the past week has been very gay, both in the way of flowers and fruits. Some of the collections of the latter, from the Regent's-Park Show, found their way to the most respectable of the shops, and Grapes, Pines, Melons, and Peaches have, therefore, been very abundant. Cherries from France come in plentifully, and there is now a good supply of Apricots from the same source. They are chiefly grown about Avignon, and in some cases are very good, but, generally speaking, the most of them are immature. They seem to be the *Breda* and the *Moorpark*, or, as the French call it, the *Abrirot Pêche*. Strawberries are now very plentiful, and "the million" are taking advantage of the supply. Vegetables are also very plentiful and good. In this class, we saw recently what we have never seen before in the market;—it is the Sea-kale Beet—an excellent vegetable, which is not sufficiently known in this country; the French call it *Poirée à côtes gros*; it was very large and fine. Flowers, in pots and in nosegays, are very abundant, and consist of Moss-Rose buds, Verbenas, Fuchsias, Hydrangeas, Geraniums, Heliotropes, Petunias, Calceolarias, Pinks, Rockets, and Sweet Williams.

FRUIT.

Apples, kitchen,	
per bushel....	7s. to 12s.
" dessert, doz.	6d. " 2s.
Pears.....	" "
Apricots, per doz.	" "
Peaches, per doz.	10s. " 15s.
Nectarines, doz.	10s. " 15s.
Cherries, lb.	4d. " 2s.
Plums.....	" "
Pine-apples, lb...	6s. " 8s.
Grapes, lb.	4s. " 8s.
Melons, each....	3s. " 8s.
Figs.....	" "
Gooseberries, per	
half sieve ..	1s. 6d. " 3s.
Currants.....	" "
Raspberries....	" "
Strawberries, per	
pottle.....	4d. " 9d.
Oranges, per 100	4s. " 10s.
Lemons, doz....	1s. to 1s. 6d.
Almonds, per lb...	2s. " "
Nuts, Filberts, lb.	" "
" Cobs, lb.	" "
" Barcelona,	
per bushel....	20s. " 22s.
" Brazil, per	
bushel.....	12s. " 14s.
Chestnuts.....	" "

VEGETABLES.

Cabbages, per doz.	9d. to 1s.
" Red, per doz.	2s. " 4s.
Cauliflowers, doz.	1s. " 2s. 6d.
Brocoli.....	" "
Savoy.....	" "
Greens.....	" "
Spinach, per sieve	1s. " 2s.
Peas, per sieve ..	2s. " 5s.
Beans.....	" "
French Beans, per	
100.....	6d. " "

Scarlet Runners	" "
Carrots, bunch ..	4d. " 8d.
Parsnips.....	" "
Beet, per doz.	6d. " 1s. 6d.
Potatoes, new, lb.	1d. " 4d.
Turnips, bunch ..	2d. " 4d.
Onions, young,	
bunch.....	1d. " 2d.
Leeks, per bunch	2d. " 6d.
Garlic, per lb. ..	6d. " 8d.
Shallots, per lb.	4d. " 6d.
Horseradish, per	
bundle..	1s. 6d. to 2s. 6d.
Lettuce, Cos, per	
score.....	6d. " 1s.
" Cabbage	6d. " 8d.
Endive, per score	1s. " 1s. 6d.
Celery, per bun.	8d. " 1s.
Radishes, per doz.	
bunches.....	4d. " 6d.
Water Cresses, per	
doz. bunches..	6d. " 9d.
Small Salad, per	
punnet.....	2d. " 3d.
Asparagus, per	
bundle....	1s. 6d. " 4s.
Sea-kale, per pun.	6d. " 1s.
Rhubarb, per bdle.	2d. " 6d.
Cucumbers, each	3d. " 1s.
Vegetable Marrow	" "
Tomatoes.....	" "
Mushrooms, per	
pottle.....	8d. " 1s.

HERBS.

Basil, per bunch	6d. to 9d.
Marjoram, per	
bunch.....	6d. " 9d.
Fennel, per bunch	2d. " 3d.
Savory, per bunch	2d. to 3d.
Thyme, per bunch	2d. " 3d.
Parsley, per bunch	2d. " 3d.
Mint, per bunch	4d. " 6d.

POTATOES.

Regent's, York,		Regent's, Scotch,	
per ton....	160s. to 195s.	per ton....	125s. to 150s.
" Kent and		Scotch Reds..	120s. " 140s.
Essex.....	140s. " 180s.	" Blues	95s. " 130s.
" Lincoln	120s. " 180s.		

GRAIN AND SEED.

WHEAT.		PEAS.	
Kent and Essex, red, per qr.	68s. to 76s.	Boiling, per qr.	38s. to 44s.
Ditto, white	75s. „ 83s.	Common	37s. „ 38s.
Norfolk and Suff- folk	70s. „ 78s.	Grey	34s. „ 38s.
Dantzic	80s. „ 88s.	Maple	38s. „ 40s.
Rostock	78s. „ 89s.	SEEDS.	
Odessa	70s. „ 75s.	Turnip, White, per bush.	— to —
American	80s. „ 85s.	Swede	— „ —
BARLEY.		Rape	82s. „ 84s.
Malting	32s. to 33s.	Linseed, sowing	— „ —
Grinding and Distilling	31s. „ 33s.	„ crushing	69s. „ 72s.
Chevalier	34s. „ 36s.	Clover, English, red	— „ —
OATS.		„ Foreign do.	— „ —
Scotch, feed	31s. to 35s.	„ White	— „ —
English	27s. „ 31s.	Trefoil	— „ —
Irish	26s. „ 29s.	Rye	40s. „ 43s.
Dutch Broo	30s. „ 31s.	Tares	— „ —
Danish	28s. „ 30s.	Canary	46s. „ 50s.
Russian	29s. „ 31s.	Hemp	48s. „ 56s.
BEANS.		Linseed Cake, per ton	£11 to £12
Harrow	39s. to 43s.	Rape Cake	£6 10s. „ £6 15s.
Pigeon	41s. „ 47s.	Indian Corn	47s. „ 50s.
Tick	39s. „ 43s.		

HOPS.

Mid & E. Kent	£14 to £18	Sussex	£12 to £13
Weald of Kent	£13 to £15		

HAY AND STRAW.

Clover, 1st cut per load	100s. to 150s.	Meadow Hay, new	80s. to 95s.
Ditto, 2nd cut	90s. „ 130s.	Rowan	— „ —
Meadow Hay	90s. „ 130s.	Straw, flail	30s. „ 36s.
		Ditto, machine	28s. „ 32s.

MEAT.

Beef, inferior, per 8 lbs.	2s. 10d. to 3s. 2d.	Mutton, mid.	3s. 6d. to 4s.
Do. mid.	3s. 4d. to 3s. 6d.	Do. prime	4s. 2d. to 4s. 4d.
Do. prime	3s. 8d. to 3s. 10d.	Veal	3s. 2d. to 4s. 4d.
Mutton, in- ferior	3s. to 3s. 6d.	Lamb	4s. 4d. to 5s. 4d.
		Pork, large	3s. 4d. to 3s. 8d.
		Ditto, small	3s. 10d. to 4s. 4d.

POULTRY.

Goslings	5s. to 6s. 6d.	Ducklings	2s. 3d. to 3s. 3d.
Fowls	2s. „ 3s.	Pigeons	0s. 6d. „ 0s. 8d.
Capons	3s. 6d. „ 4s. 6d.	Rabbits	1s. 0d. „ 1s. 6d.
Chicken	1s. 9d. „ 2s. 3d.		

PROVISIONS.

BUTTER.—Cwt.		CHEESE.—Cwt.	
Dorset, fine	98s. to 102s.	Cheshire, fine	70s. to 80s.
Do. middling	80s. „ 86s.	Gloucestershire, double	68s. „ 74s.
Fresh, per doz. lbs.	8s. „ 12s.	Ditto, single	56s. „ 70s.
Friesland	88s. „ 92s.	Somerset	68s. „ 80s.
Kiel	90s. „ 94s.	Wilts, loaf	63s. „ 74s.
Carlow	94s. „ 100s.	Ditto, double	60s. „ 68s.
Waterford	88s. „ 94s.	Ditto, thin	54s. „ 64s.
Cork	84s. „ 98s.	Ditto, pines	72s. „ —
Limerick	86s. „ 98s.	Berkeley, thin	62s. „ 66s.
Sligo	— „ —		
BACON.—Cwt.		HAMS.—Cwt.	
Wiltshire, dried	78s. to 80s.	York, new	78s. to 90s.
Waterford	70s. „ 74s.	Westmoreland	76s. „ 86s.
		Irish	70s. „ 80s.

WOOL.

Down Tegs 1s. ½d. to 1s. 1½d.	Kent Fleeces 1s. ½d. „ 1s. 1½d.
Ditto Tegs and Ewes	Leicester, fleeces
Half-bred Hog- gets	Long, heavy do.
Do. Wethers	Combing skins
1s. 1d.	Flannel wool
	Blanket wool

TO CORRESPONDENTS.

CUCUMBER AND WATER MELON (A. B.).—We are informed that Mr. Rogers's *Empress of the French* Cucumber is an excellent sort, bearing abundantly; and that the Australian Water Melon is doing well under the peculiar treatment adopted at Chiswick.

BOTANICAL WORK (A Young Gardener).—The best work you can purchase to furnish you with the characteristics of each genus and species, is *London's Encyclopedia of Plants*. A new edition is just published. A pocket lens will cost you about two shillings.

ONION GRUB (H. S.).—We know of no cure when once the grub attacks Onions. It is said that the fly, parent of these grubs, may be kept away by sprinkling a little gas-lime between the rows of young Onions.

THINNING GRAPES AND BUDS OF BALSAMS.—Much will depend upon the age of the Vines, as well as the strength of the rods; from six to twelve bunches on young Vines; from twelve to twenty and more on old strong Vines; but the fewer, the better they will be. From a foot to eighteen inches is a good distance for the side-shoots; but in old Vines they might be a little closer. You have acted right in thinning the Balsams' buds; they will bloom well if well supplied with rich compost and manure-water; but where they are very fine, the plants should have pots eight or nine inches across at top.

CALCEOLARIAS (G. Archer).—The batch of seedling Calceolarias raised from *Sultan* are all very interesting flowers, and well worth cultivating as bedders, particularly 1, 2, 4, and 5.

GREEN FLY AND RED SPIDER (T. Alder).—As you are unable to use Sulphur, or other unseemly application, try Laurel-water. It will do no injury to the Peach. We have to apologize for this answer coming so late, which arises from your letter being mislaid.

NAMES OF PLANTS (S. M. S.).—The wild flower is *Eranthis fistulosa*, or common Water Dropwort. From a single bloom we cannot tell which species your *Aloe* is. It may be *A. ferax*. (*A. B. C.*)—1 and 2 is unknown to us. 3. *Linaria cymbalaria*, or Toad Flax. 4. *Celsia arcturus*. (*Rev. W. J. Jenkins*).—One leaf is of *Ilex diphyrena*, or Two-seeded Holly; the other, *Euonymus japonicus variegatus*. They are both hardy trees.

INSECTS ON POTATOES (F. R. C.).—The little insects found in clusters of the size of a pea on the leaves of the Ash-leaved Potatoes are the very young larvae of the Oil Beetle (*Meloe proscarabeus*). They are parasitic, in a more advanced state, in the nests of wild Bees; and are, we believe, in no way injurious to vegetation.—J. O. W.

POULTRY SHOWS.

AGRICULTURAL SOCIETY'S (Royal) at Carlisle. July 23rd, and following days. Secs., J. Hudson, Esq., Hanover Square, London.

AIREDALE, at Shipley, 14th of August. Secs., J. Wilkinson, Esq., and J. G. Hyslop, Esq.

ANERLEY. August 28, 29, and 30. Secs., Edgar Smallfield, and Henry F. Wells.

BEDFORD. November. Secs., J. T. R. Allen, Esq., and F. A. Lavender, Esq.

BIRMINGHAM. 11th to 14th of December. Sec., J. Morgan, jun., Esq.

DEWSBURY. 24th August. Secs., R. R. Nelson, Esq., and J. Newcome, Esq.

DORCHESTER. 24th and 25th of October. Sec., J. G. Andrews, Esq.

DURHAM AND NORTH YORKSHIRE, at Darlington, 6th and 7th of December. Sec., J. Hodgson, Esq.

HECKMONDWICKE (near Leeds). Aug. 28th. Secs., J. Kelly, Esq., and F. Brearly, Esq.

KEIGHLEY. September 5th. Sec., Wade Smith, Esq., Keighley.

LINCOLNSHIRE (NORTH), at Boston, July 26th. Sec., J. Hett, Esq., Brigg, Lincoln.

NOTTINGHAMSHIRE, at Southwell, 19th and 20th of December. Sec., R. Hawksley, jun., Esq., Southwell.

PRESCOT. July 4th. Sec. Mr. J. F. Ollard.

SOWERBY BRIDGE. Sept. 14th. Sec. Mr. F. Dyson.

TOTTINGTUN. August 17th. Sec. Eli Roberts, Esq.

WIGHT (ISLE OF). Aug. 7th and 8th. Secs., J. Vaux, Esq., and G. Lock, Esq., Ryde.

YORKSHIRE AGRICULTURAL SOCIETY'S, at Malton, 1st and 2nd of August. Sec. Mr. John Hannam, Kirk Deighton, Wetherby.

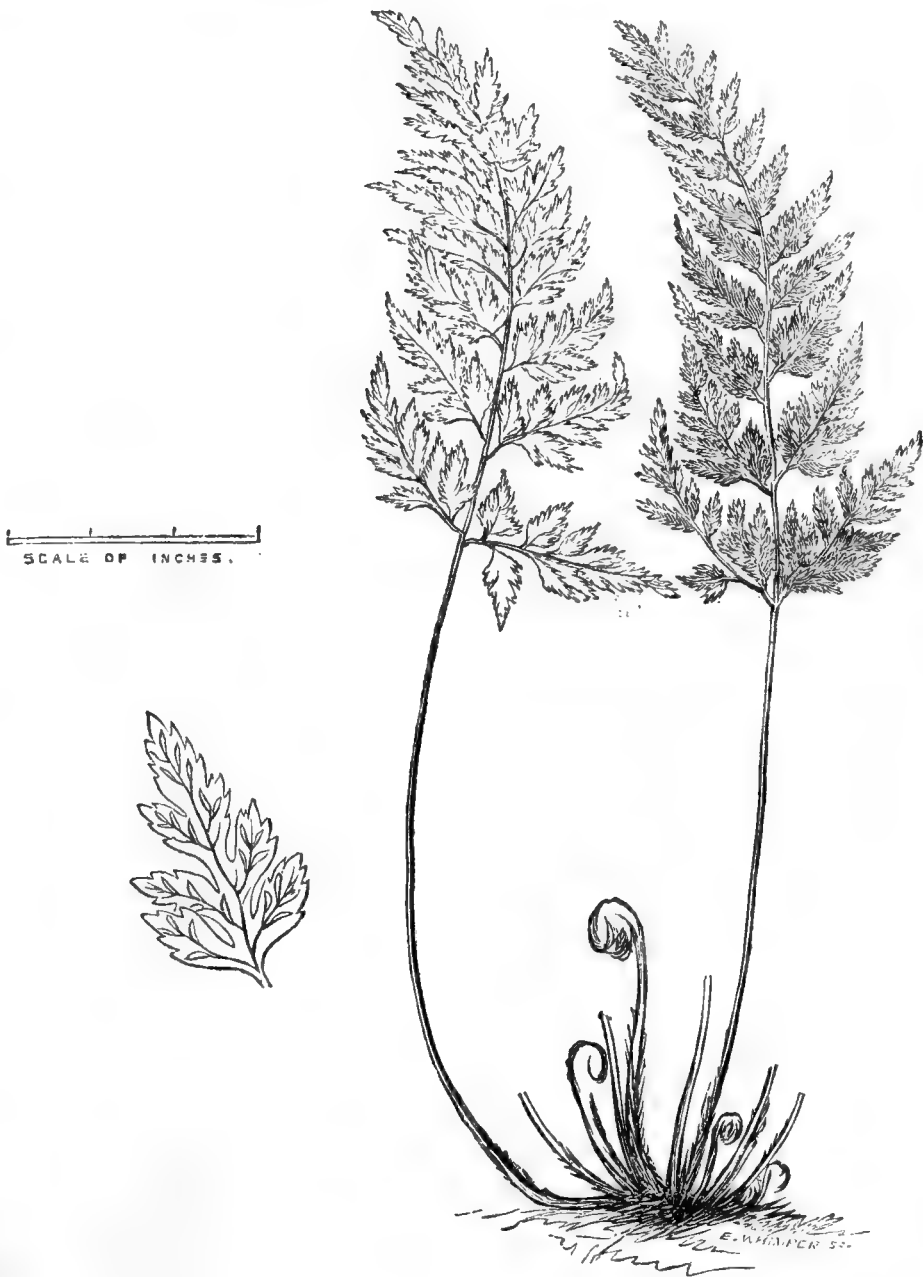
N.B.—Secretaries will oblige us by sending early copies of their lists.

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WEEKLY CALENDAR.

D M	D W	JULY 17—23, 1855.	WEATHER NEAR LONDON IN 1853.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in Inches.						
17	TU	Peacock Butterfly.	30.058—29.965	71—48	S.W.	02	4 a 4	7 a 8	10 4	3	5 46	198
18	W	Large Tortoiseshell Butterfly.	30.012—29.979	76—46	S.W.	—	5	6	10 17	4	5 52	199
19	TH	White C Butterfly.	29.980—29.960	72—43	S.W.	—	6	5	10 29	5	5 56	200
20	F	Purple Emperor Butterfly.	30.084—30.066	80—48	S.W.	—	8	4	10 39	6	6 0	201
21	S	Sun's declinat., 20° 34' N.	30.173—30.163	83—46	S.W.	—	9	3	10 51	7	6 4	202
22	SUN	7 SUNDAY AFTER TRINITY.	30.204—30.148	84—45	S.W.	—	10	2	11 4	8	6 7	203
23	M	Lage Heath Butterfly.	30.159—30.152	89—56	S.	—	12	1	11 21	9	6 9	104

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 72.8°, and 52.1°, respectively. The greatest heat, 94°, occurred on the 17th, in 1834; and the lowest cold, 39°, on the 18th, in 1851. During the period 99 days were fine, and on 97 rain fell.



NEXT among our hardy Ferns come the ASPLENIUMS, and first among these, still adhering to the alphabetical order, is

ASPLENIUM ADIANTUM-NIGRUM.

This, the Black Maiden-hair-like Spleenwort, is popularly known as the *Black Maiden-hair*, and *Oak Fern*. Its main *root* is black, scaly, and furnished with many wiry, dark-coloured rootlets. The *fronds* rise from the crown of the root, and vary in height from three inches to nearly two feet. The specimen fronds from which our drawing was taken, and which is about one-third

the natural size, were about fifteen inches high. These greater heights are attained by the Fern when growing in a shady situation and rich soil, as was our specimen at Sherfield, in Hampshire. The *stem* of the frond is dark chesnut-coloured, and glossy; the part joining the root scaly; about half of its length bare, and the other half leafy. The leafy portion has a lengthened-triangular form, the lower pair of the leaflets being longest, each pair above them being gradually shorter and shorter, until they pass insensibly into the single terminating leaflet. The *leaflets* are also lengthened-

triangular in form, and are more or less alternate, and so are the leaflets composing each leaflet. The leaflets are spear-head-shaped, and so finely toothed at their edge as almost to appear fringed. The pair of leaflets nearest the main stalk of the frond are so deeply cut as to be divided into still smaller, or sub-leaflets. They all are bright light green on the upper surface, but the under surface is much paler.

The *fructification* (sori) appears at first in oblique whitish lines, varying in number from three to seven, on the under surface of the leaflets. The whiteness arises from a thin covering (called the *indusium*), which bursts with a smooth edge on the side next the mid-vein of the leaflet. The covering finally peels off, and then the sori, which are brown, spread until they cover the entire back of the leaflet, all but the edge. This spreading, or running together, of the fructification is called confluent by botanists. The seed, or spores, are in various states of growth from April to October.

There are two varieties, *acutum* (very pointed), and *obtusum* (blunt). The only differences between these and the species we have described are that the fronds, the leaflets, and leaflets of *acutum* extend to a longer and sharper point, whilst those of *obtusum* are more rounded. The intermediate forms are so various, that we really consider the above not entitled even to the subordinate distinction of a variety.

Variegatum is a more certain variation, for it is very distinctly variegated with cream-colour. It was found on the church of Shottisbrook, in Berkshire, during 1847, by Mr. Silver.

The generic name, *Asplenium*, is derived from *a*, not, and *splen*, the spleen, alluding to the supposed medicinal power of some of the species to lower the activity of the spleen. The specific name, *Adiantum nigrum*, is literally translated in the popular title, Black Maiden-hair.

This is one of the common Ferns of the British Islands, being found very generally on old walls and among stones in shady places. It is spread over all Europe, and was known as a native plant to our earliest herbalists. Gerarde says it grows "upon trees in shadowie woods, and now and then in shadowie banks, and under hedges." We never found it upon trees, nor have we spoken of it to any one who has. Ray is more correct in stating that it is found "in shadowy places at the roots of trees and shrubs; in shaded fields, and on old walls generally." The same author is the first of our native botanists who gave an accurate description of this Fern; a description which he published in the first volume of his "Historia Plantarum."

This Fern is one of the best among our native Ferns to examine as an illustration of the peculiar packing, or rolling up of the fronds previously to their expansion to the light and air. The point of the frond is turned inwards, so that as the frond unrolls the upper surface is always outwards, and the lower, or seed-bearing surface is always within and protected.

In Ray's time, the latter half of the 17th century, this Fern was believed to be a beneficial medicine in

coughs, asthma, and some other diseases, and even Hoffmann recommended its use as an anti-scorbutic, but it is no longer employed even by herbalists.

It is a Fern very useful to the cultivator of this Natural Order of plants, for it is evergreen, and will thrive in pots under glass even better than upon rock-work in the open air. Hence it is a good tenant for a Wardian case. It will endure continued exposure to bright sunshine, but is then of a dwarf stature, but under shade, and in a favourable soil, it attains a medium size. The soil best suited to it is a mixture, in equal parts, of sandy loam, leaf-mould, limy rubbish, and pebbles.

It is easily propagated by dividing the crowns in early spring. April is as good a month as any for this purpose.

CUTTINGS IN SUMMER.

SAINT SWITHIN ought to be the patron saint of all the propagators; if only for this reason, that his day is the best day in the year for putting in summer cuttings; that bottom and top-heat is then provided free of expense; and that all that the propagator has to do is to provide the means for giving the right degree of moisture and the right degree of stillness to the air which surrounds his handiwork.

The natural conditions, that is, the glare of the sun, and the too much or too little dryness of the open air about this time, are well known to be great enemies to this kind of propagation—out-door cuttings, as we say; yet many, very many, cuttings will root now easier and at less expense than at any other season, with merely a slight screening from the sun, such as the north side of a hedge. Between this point and that at which propagation ceases to be profitable out-of-doors, the natural conditions are overcome in so many ways, by different individuals, that a great choice is left for the amateur to choose from; and my object, to-day, is to explain some of the ways which have proved the best and the easiest to follow, by those who know very little of gardening, but who are anxious to learn all they can, and are able and willing to pay the best pipers to the bargain.

PINKS.—I shall begin with Pinks. The best strike of them I ever saw or heard of was under my own eye, many years ago. Mr. Muirhead, now, and for many years, gardener to Lord Charles Wellesley, was then one of my helps, and at a consultation on the 20th of July, 1837, he undertook to strike 500 Pink pipings, or cuttings, without losing more than two cuttings out of a hundred, or only ten out of the whole lot. I believe there was some sort of betting over this feat; and I recollect that I rather sided with a couple or three other very clever assistants against Muirhead; but in about six weeks he struck off the 500 with the loss only of four cuttings, and three out of the four were killed by a mere accident. The glass fell on them, and crushed them.

When a gardener's son takes up propagation from a natural taste, and is naturally clever himself, he makes the best of all propagators. Our winner was of that class; but I refer to this merely for the opportunity of saying, that we who "pipe" for THE COTTAGE GARDENER cannot make a propagator: yea, all the professors in all the colleges will never make a propagator worth sixpence for his salt, by writing or talking, unless the student has some natural taste for the work. You might think that self-interest would be the greatest inducement for an amateur to learn to be a clever hand

at striking cuttings—and so it would, by saving his purse—but from what I have seen through life, I am certain that all the selfishness on earth is not so powerful in teaching how to strike cuttings as a natural turn or fancy for the thing,—the only thing in gardening which I could not undertake to learn to the stupidest clown, if I had only time enough to hammer against his brains.

The said Pink-cuttings—for they were not piped—were struck in an *open* part of the kitchen-garden, without the smallest preparation for bottom-heat, under common hand-glasses, but with a different management from the usual run. There was a shallow trench cut out across one end of a cabbage plot of ground, a few inches wider than the hand-glasses, and four inches deep; three inches of this was filled with the cutting compost, and the surface of the cutting-bed, as you may call it, was an inch *under* the general level of the ground, instead of above it, as most people would do. The bottom was clay, and the compost nothing but leaf-mould and sand for the bottom, say two inches deep, well rammed down; then an inch of half sand and half peat, with a little covering of sand on the top, as for cutting-pots. This was well watered and beaten down the day before the cuttings were put in. I never saw Pink cuttings made so short before; there was just the smallest possible touch of solid matter left at the bottom, without regard to joints. The leaves were left untouched, and the whole were put in as close as they could stand. Whenever the sun was strong from nine in the morning to five in the afternoon the hand-glasses were shaded with canvass, and kept close; but there was a considerable opening left for air every night, from first to last, and very little watering was given all the time; but that was owing to the clay bottom, and to the large size of the cutting-ground.

One half the failures with summer cuttings are from too much, or too little, water, or from one being obliged to water often, owing to the cuttings being, in a pot or very small space, liable to get dry too often; it is to get over this difficulty that some people are so fond of putting their cuttings in behind walls or hedges. I never thought much of that system, but it is useful when one has little time to attend to them properly in the full sun.

Now, there is scarcely a plant in a garden of which cuttings cannot be struck from this time to the middle of September. I mean common plants, as Roses, Fuchsias, Geraniums, Pinks, Cloves, Carnations, Dianthus of all sorts, Scarlet and other Lychnises, Penstemons, Hollyhocks, and such like. Also most of the common evergreen shrubs, such of them as come from cuttings will root without much shade or shelter from glasses, and so will Geraniums, and many other soft-wooded plants; but, no doubt, each and all would root sooner by the help of hand-glasses, therefore, when one happens to have a hand-glass, or a few of them by him, there is little else for them to do now, and they had better be used than not, and for all the plants in the "Dictionary," I would not ask a better way, or a better bed, than that in which the Pinks did so well.

But how is this propagation to be done without hand-glasses? Just as well, if not better than with them. I would never buy a hand-glass on purpose for cuttings, until I was sure I could strike as many cuttings in one year as would pay for the glass. A couple of shillings will buy a good many squares of glass about eight inches wide, and ten or twelve inches long, and go farther that way for striking cuttings than twelve shillings in hand-glasses. An old tea-chest, or an empty cigar-box, may be turned into a "frame." A hotbed-frame, I mean, by merely knocking out the bottom, and the loose squares will do to cover the top just as well as a "garden-light," and be as good as ever when all is done with.

I have now proved that a box, or frame, which is square on the top, is as good, and I think better, for cuttings than one which slopes like a Cucumber-frame; then a cigar-box, with the bottom out, and one loose square of glass lying on the top of it, is the simplest thing that I can think of; and I am quite certain that any cuttings which will root under a hand-glass, or under a bell-glass, will root equally well under a cigar-box, or any other box like it.

There is even a simpler way of growing cuttings than this, which I have in present use, and have struck many cuttings by it this season. I have adopted the same plan when I had scores of idle hand-glasses. It is a garden-pot turned upside down, and the bottom of it broken out with a hammer, nearly to the rim or side of the pot. This does not hurt a pot for future use; indeed, for many people, it would be much better to have pots without bottoms, except a small ring, just enough to catch the ends of a couple or three large crocks, then there could be no bad drainage, and the best part of the pot would not be taken up with crocks. I have broken out the bottoms of more pots, and large pots, too, than I could now find standing room for, on purpose to secure perfect drainage, and more room for the roots of some favourite specimens; and I know the plan answers well, and that common pots do not answer half so well. It was from having such pots by me, that I took to striking cuttings with bottomless pots; and really, when I come to think of the many good plants which I have struck that way, I must acknowledge that this is the nearest touch to a real hotbed of all the plans I ever heard of; from this also I first took up the notion that perpendicular light is better, or, at least, is less hurtful, for cuttings, than that from the slope of a hotbed or roof, but a *broad* stream of light is bad for all cuttings, whether it be from a sloping or a square top; therefore, if I were breaking up an old tea-chest, or any packing-case, to make square frames of for cuttings, I would never make them wider than ten inches, and I would make them deep enough, so that the top of the cuttings stood one foot from the glass; three feet would be a tidy length for this kind of box. It might have a finger-hole at each end near the top, to lift it by, or you might put a hoop across the middle, but it does not want to be moved often when it is full of cuttings. The squares of glass should just fit it across, and no more, then they will do, if placed edge to edge; or you may lap one edge over the other, if you think it best; or you might fix them all on a lath frame; but I would never fix them for myself. I can take up a square, here or there, and look down to see how the cuttings are doing, better than by taking up the whole frame, and after watering, I leave off the two end squares, and thus cause a current to pass under the rest of the squares, which is better than tilting a frame till the greatest part of the wet is dried off.

Sometimes the wind is apt to blow off one or more of these loose squares, but that can be prevented by a piece of twine fastened to a nail at one end in the middle, drawn over the centre of the squares, and the end tied with a loop knot to a nail at the other end. So you see there is nothing in the world easier than to contrive a substitute for hand-glasses; indeed, you might grow, or hasten on, Cauliflowers with such things, just as well as with the best that ever were made, and you might call the bottomless pot your patent bell-glass, or your patent sun catch, for it will get as hot as anything, and the vapour thus raised from the soft cutting-bed will cause the cuttings to root much faster than those under a cigar or other box. If I had any very rare seeds of a hardy, or half-hardy plant, I would rather trust it out-of-doors, under a bell-pot, than into the hands of a spruce London propagator. I had a score of such

contrivances myself in use last April and May, and my best hit is with

DIELYTRA SPECTABILIS.

I had two packets of seeds of it last year, from two of "our own correspondents," one of which I sowed last September, in the centre of a pot of choice seedling Geraniums, which were only round the sides; three of these were up when the long frost came, but in spite of me, I lost the three, and none more came up from that lot. After that, and when the winter was over, I sowed the other packet, in which were six seeds; in a month, one seed appeared above ground, but looked very languid, and in ten days I lost it also. I now began to think very seriously how to contrive with the rest, if they should appear; but I waited and waited for ever so long, and at last a second seedling began to heave up the surface of the mould and the surface of my reasoning, and the two surfaces progressed favourably up to this day; but no more seedlings have yet appeared, but this one, which is now, I hope, past all mishap. It is on a west border, close under a wall, and four loose panes of glass round it—one on each side, one in front, and one across the top; on the behind side, the wall protects it; this space is six or seven inches square, filled with best light composts—the ball safely in the middle, and a layer of charcoal grit on the surface; the glass is not very air-proof at the angles or on the top, the pieces being merely stuck in the earth; in the fore-part of the time, there was a box over this Crystal Palace, with a glass top to it. Nothing can be more healthy than the seedling, but it does not grow nearly so fast as I thought it would, judging from the growth of an old plant. At the best, and under the most favourable circumstances, I think this Dielytra will be difficult to rear from seeds; I think it must have been propagated by division in China for so many ages, that the spirit of seeding is broken within it, and that alone accounts for all this difficulty; but I also think we shall be able to overcome this, or, I should say, rather, that we shall be able to restore the original fiat in the plant itself, by degrees; also, that every flower of it will cross with some other species, to increase the family honours, as soon as the seeding process is restored. I hold it to be next to impossible to cross the present or old plant with another species, and rarely with its own pollen; and to quicken the process of restoration, we ought to know the exact circumstances under which our correspondents seeded their plants, that others may do the same; for we cannot have too many seedlings from the old species to choose from as parents for crossing, as, perhaps, not more than one plant out of a hundred seedlings will seed more easily than the parent during the first few generations.

Depend upon it, crossing will be more popular and more fashionable than it ever was yet. The writer, your humble servant, had to battle, single-handed, against the heavy-weight of his day on the subject of scientific crossing, but I have hammered the thing so well, from the commencement of THE COTTAGE GARDENER, that I have made some breaches in the Malakhoff of practical science; but I shall not rest here. As long as there is breath in me, I shall not rest satisfied till the citadel is in the hands of the cross-breeders.

D. BEATON.

DEATH OF MR. PUSEY.—With no ordinary regret we have to record the death of Philip Pusey, Esq., of Pusey, near Faringdon, in the county of Berks, for although of late he had been incapable of active employment, yet the remembrance of his former services, induced us to hope, even against hope, that he might once more arise

again to confer benefits upon the cultivators of the soil. The family name is Bouverie, being a scion of the house of Radnor, but the father of the deceased assumed the name of Pusey. Mr. Philip Pusey, his eldest son, was born on the 25th of June, 1799, and he married, in 1822, Emily, daughter of the Earl of Carnarvon. Her death was a blow to his happiness, from which he never effectually recovered, and the paralysis induced by grief and other mental agitation, at length brought him to his rest, on Monday, the 9th instant. He died at the residence of his brother, Dr. E. Pusey, in Christchurch, Oxford, and was buried at Pusey. He was one of the oldest members of the Royal Agricultural Society, was a contributor to its Journal, which, until illness prevented, was under his especial superintendence, and no man laboured more earnestly than he did, to illustrate the Society's motto—"Practice with science."

GARDEN VISITING.—GARDENERS AND THEIR EMPLOYERS.

VARIOUS letters, in defiance of editorial injunctions, have prompted me again to refer to this subject, though I hardly know where to begin and where to leave off; and, unlike some favoured people, who can have leisure to sit down and think and ponder over an elaborated essay, few of us gardeners, just now, have time to arrange our ideas. I have received bundles of thanks for saying a word now-and-then quietly, in behalf of "my order;" and something like complaints from others, that I would unsettle the minds of servants by giving gardeners such a passion for roaming, that home and its employments would become irksome and disagreeable. Others, like the rattling scolding minister's wife, who, on asking a text from the *gudeman*, from which to make a sermon, and receiving a pithy sentence from Solomon, about its being "better to dwell in a corner on the housetop, than with a brawling woman in a wide house," come at once to the application; but, unlike the worthy woman, who at once took it home and made the reproof personal, they rather wish to regulate their conduct by mine, and ask me, I know not scarcely whether in satire or in real earnest—"Now, how often do you go from home?" And do you "go whenever you like, and without saying *nothing to nobody*?" "My employer always wishes to know where I am, and it is such a bore to be telling when you wish to leave the place for an hour or two."

Now, had I time and ability, there is quite sufficient material, in these varied suggestions and enquiries, for constructing a common-sense valuable manual upon social and professional economics. Some of the most fruitful sources of unpleasantness and disappointments among gardeners, arise from a mistaken view of their position in reference to their employers, and also from mistaken views of those employers as to what their own true interests are, so far as their gardeners are concerned. For instance: Here is a fine old place, pretty well kept up, but the proprietor is of a very retiring disposition. He cares nothing for novelties, and allows, in consequence, no means for their procurement. He does not like to see strangers upon the premises; and this is so far a hint to the gardener to make no friends in the neighbourhood. The hardy things take pretty good care of themselves, but the plants for ornament get fewer by degrees and desolately less. Gardeners are constantly leaving, and the effects of these transitions soon manifest themselves. The place in time comes to be looked upon as a mere fill-gap; and a good gardener will stay no longer than it will suit himself. Every stimulus and excitement for honourable emulation is removed. He might get cuttings from friends, it is true; but why trouble himself with cuttings that he

is most likely never to see as established plants: and why lay himself under any obligation where he could not in an open, honourable manner, send a packet of cuttings from the premises? Many neighbours would be glad to see him, and compare professional notes; but he remains doggedly at home, and is soon apt to become morbid and discontented, merely from his felt isolation; and confirmed in that isolation by the honourable, manly feeling, that no visits of his shall submit himself, or his return visitors, to the indignity of passing through the place in a skulking, clandestine manner, because their presence would give offence. Is it in human nature, that a man thus cooped up would long retain his professional enthusiasm to do every thing possible to improve the place, or maintain that deep, earnest respect for his employers, without which it is next to impossible that he can bend all his energies for the promoting their interests, and the carrying out of their wishes? A faithful servant he may be, and he *must* be, if he would not forfeit his own self-respect (without which a man is truly poor indeed); but mere honest integrity, allied, as in this case it must ever be, with industry and attention, can never supply the want of emulation and professional enthusiasm. A narrow-minded contractedness allied to selfishness will here, just as everywhere else, meet with its attendant concomitants.

Here is another instance. An employer's means and wishes are such, that he must be satisfied more with the merely beautiful and useful, than with the scarce, the novel, or the costly. He has proved that the gardener is even more anxious to improve the place than he is himself, and wisely leaves the matter entirely in his hands. He is an honourable fellow, and never says he should like to go to such and such a place, if it was convenient, but the convenient time is always made. When return visits are paid to him, he does not obtrude the sight of these visitors upon any of the family unnecessarily; would rather take the turn of a walk to avoid meeting them directly; but not if that would involve any thing of the doing-things-by-stealth principle. The very appearance of wishing to conceal is fearfully ominous, and many a reflection as to a gardener's rectitude would never have emerged itself into form, had the honest fellow had the boldness to be respectably open, and fearlessly straight-forward in all his doings. Under such regime the place soon improves. People, as a whole, have little disinclination to give, when there is the prospect of getting something in return. So great is the change produced, that the tastes and the desires of the proprietors get insensibly changed too, and all goes on happily and comfortably. Years may have passed since a nurseryman sent a plant to the place, but now baskets come with something like regularity. The employers may at first grudge the expense a little, but they soon find an excuse in praising their gardener, and saying they must get a few new things to please him; and though the real fact is that their tastes are so much changed, that they must have them to please themselves. I could point to a number of places, previously never heard of, that are now places of note in their respective neighbourhoods, that have risen into celebrity, not so much by the outlay of great sums of money, as by the industry and enthusiasm of the gardener, and the full confidence reposed in him by his employers. Such a man, when he takes a tour, travels for a purpose, and is always encouraged, rather than otherwise; and his general characteristic is a close stickler at home. I lately heard a gentleman say, in a playful manner, that "he thought he must prevent his gardener going out to such and such places in future, as he was always engaged in so many fresh plans and fresh works afterwards." I believe that he fully relished all the changes; and, as the best proof, that his words

were to be read backward fashion, I happened to know that he paid the whole travelling expenses.

It is hardly fair to ask me how often I go from home; and I do not think my memory would be good enough to serve me, but, as a general rule, I am rather a home bird, and, at the present rate of visiting, it would be many years before I could accept my present invitations. The second personal point is of more importance, and as that may be interesting to some others, I may state, that I make it a settled matter never to leave home for any length of time without my employer being cognisant of it. Perhaps I may be a little selfish in acting thus, for I freely own I could not enjoy myself when away for a day, if the thought would be always obtruding itself that I might be wanted, or that my absence would cause any unexpected inconvenience. There is an old axiom, that "what is worth having, is worth asking for," and many disagreeables would be avoided would young gardeners especially keep this in mind.

I knew a good gardener who gave up a good place, and lost one of the kindest of employers, because, having gone from home a great deal, and without any notice, when remonstrated with, and told it would be necessary in future that he should inform them when he went away, he at once refused to do so. I believe that he himself would have made short work with an under-gardener, who, without consulting him, would have taken a day or two every now and then, and thus absented himself, however much he might be needed. If gone about in a respectable way, there are few employers who would not allow their gardeners some time, less or more, every year, for visiting good places, confident, that if the gardener did not keep his eyes and his tongue in his pocket, they would ultimately reap some benefit, even from the feelings of emulation fostered.

A few other things besides visiting gardens have here been introduced; and, perhaps, not wholly without use.

As a class, and considering our social position, gardeners can occupy a very fair place for general intelligence; and yet, as a body, we are far behind in recognising our position as servants, and as such, paid for contributing to our employers wishes.

I believe, that three parts out of four of the unpleasantness between employer and employed arise from this fact, partly owing to the obscurity and secrecy which formerly hung over many gardening operations, and of which none but the practically initiated were supposed to know anything; and partly to forgetting that circumstances are now changed, and that many employers study botany, plant-growing, and general gardening, as a pleasant and useful recreation. I would be the last to advise; indeed, I should be the very first to repel, anything approaching sneaking servism, or crawling subserviency, either as affecting personal conduct, or conscientious convictions; and there are but few gentlemen who would not spurn such sacrifices to gain their favour; but as a class, it might do no harm to remember, that while we take a gentleman's pay, we are bound, in all things lawful, to carry out not so much our own as his wishes; and if that is associated with an open, straightforward arrangement, as to cuttings given and taken, visits paid and returned, nothing left in uncertainty, no occasion for even a seeming concealment, then we may confidently expect that we shall not be overloaded with discomforts, repinings, or causes of complaints. Not that even all this honourable and upright conduct, associated with good, general, practical knowledge, will always be sufficient to give satisfaction to employers and comfort to ourselves; for if it be true that gardeners sometimes forget their duties as servants, it is no less true that employers frequently do not perform, or do not know,

their duties to the employed. But even in such cases, the man of open-breasted integrity, if he does not obtain the free confidence of those naturally distrustful, will, at least, secure his own self-respect, and the sympathies and best wishes of all honourable men. If the gardener should be satisfied with the propriety of relinquishing such a situation, these sympathies will be most valuable in future; and, provided he gives up his charge with prudent respectfulness, there will be no unpleasant associations to reflect upon. R. FISH.

UNWISE RETRENCHMENT.—Wise retrenchment is the motto of our time. But unwise retrenchment is a folly as absolute as unwise extravagance. Is this latter never advocated by way of warning to the cautious how far they interfere with vested rights, and as a practical illustration of the danger of "opening the flood-gates?" A Melbourne paper, commenting on the new budget of the Australian colony, says:—"It is matter of regret that the retrenchment of the Government establishments has had reference to three officers of great importance to the colony. The reduction of the amount of grant to the Botanical Gardens, Melbourne, from £4,192 to £2,000 will necessitate the abolition of the office of Government botanist, hitherto held by Dr. Müller, a gentleman whose scientific acquirements are of the highest order, and whose enthusiastic pursuit of the inquiries in which he was engaged had already secured, and promised yet more fully to secure, the most advantageous results for the colony and for science. The vote of £2,000 for the Museum of Economic Geology, and of a similar amount for the Museum of Natural History, is dropped from the amended estimates altogether. This will involve the abolition of the offices of Government Geologist, and of Curator of the Public Museum. Mr. Selwyn and Mr. Blandowski, the gentlemen who held these offices, have already done the colony good service, and the greatest benefits might have been anticipated from their exertions upon a field of usefulness so little explored as ours."—We are not acquainted with all the circumstances which have led to the adoption of a budget likely to throw these public servants out of their employments; but we read in the Australian papers that public attention has been called to these reductions, and that Mr. Greeves, one of the Members for the city of Melbourne, has given notice of a motion which will bring the whole matter under the consideration of the Legislative Council.—(*Athenæum*.)

PLANTS SUSPENDED IN BASKETS.

(Continued from page 205.)

TRAINING AND WATERING.—I have great pleasure in resuming this interesting subject. I have had several letters from readers of *THE COTTAGE GARDENER*, expressing the satisfaction the writers have felt that I have given to them by drawing the public attention to this mode of growing plants. My next division of the subject is Training and Watering Plants in Baskets, two important points in their culture. In reading over the last paper on this subject, I find, in giving directions on planting, that I have omitted one thing, and that is, the placing of *more than one plant in a basket*. At the Crystal Palace, they have put in each several kinds of plants, such as one *Maurandya*; one *Eccremocarpus*; one *Ivy-leaf Geranium*; one *Cobea scandens*; and one *Nierembergia*. Now, whoever wishes to grow them in such large baskets as those at the Crystal Palace, might with propriety adopt the same plan, with as many variations as the number of species the cultivator possesses will

allow, and thus give a pleasing variety to the appearance of each. Small baskets, of course, should have only one plant in each, because, in such the quantity of soil would not be sufficient to support in health more than one plant. Medium-sized baskets might have two or three plants in them. In selecting the plants, some attention should be given to vary the colour of the flowers and the leaves. This, if judiciously done, will materially add to producing the best effect. Equal growers should also be studied to place together, so that every side of the basket is furnished alike at the same time.

TRAINING.—As soon as the plants are set out for this purpose, diligent attention should be paid to train them in the way they should go; for "as the twig is bent, the plant is inclined." Young plants in pots, intended, when grown larger, to be placed in baskets, should have their shoots pegged down with hooked sticks, and if the pots are encircled with rings of zinc wire, the shoots, as they grow, could be very conveniently tied down to these wires. Some plants have shoots so brittle that they are apt to snap off at a joint if bent down too suddenly. The *Ivy-leaf Geranium*, for instance, is one whose branches will break off at once if thus roughly treated. The way to bring such into the desired position is, slightly bruise a shoot just in the place where it hangs over the edge of the pot, or basket. This bruising without breaking gives a flexibility to the shoot operated upon, and permits the branches to be trained into the positions required to spread equally on every side. The grand aim in training is to give the plants a symmetry and a form so that the group is not one-sided. This training should be attended to from the first, when the plants are small, in order to make handsome, well-furnished plants.

Now, if I had twenty baskets to furnish with plants to-morrow, I would put into them at once the best plants I could get for immediate effect; but I would immediately set to work to cultivate young plants to replace them as soon as they (the young plants) were of a sufficient size. I warn the growers of plants, and the intended growers, too, that the plants in baskets will not keep healthy, or live so long as plants treated and grown in the ordinary way. Hence, it is desirable to have, as it were, a nursery of young plants in training to succeed the old ones when they become naked, or shabby, or die. If the young plants have made good growth, and have reached as low as the bottom of the pots, then cut as many square pieces of wood, half-an-inch thick, and as much across as the width of the upper diameter of the pots, bore a hole through each corner of each piece of board, and then take four pieces of strong wire, each long enough to reach from the bottom of the pots to meet above the plants, six, or eight, or ten inches in proportion to the size of the pots. Put one end through the hole at one corner of the square board, and twist it firmly to it. Do so with the other three, and then set the pot on the board, and bring the ends of the wires together above the plant. Twist all four together, and then suspend the plant, pot, and board, to the roof of the house. Proceed so with the remainder of the plants till they are all suspended. If there is a preparatory house, or a deep pit, this nursery of plants preparing for baskets might be conveniently placed there till they grow larger, or come into bloom, or till the old plants in the baskets require renewing. In the meantime, let every attention be given to keep the plants healthy, free from insects, and properly trained downwards, to make them fit and good plants to place in the baskets so as to give effect at once. This is a correct description of the method of preparing plants for baskets carried out fully by G. C. Schwabe, Esq., near Liverpool, and very well it answers.

Another point I may as well just refer to, and that is

pruning, or rather, *stopping*. Some plants do not make side-shoots in abundance. Such I have found it necessary to stop at an early stage, in fact, close to the base of the plant. Without stopping, that is, nipping off the single upright first shoot, the plant very often grows on with a single stem, and is then far from handsome, especially when the first-made leaves fall off, and the stem becomes naked. I stop them, again and again, until I have a sufficient number of shoots to form a leafy, drooping plant.

WATERING.—It has always been an objection to suspending plants, that it is difficult to water them, and also to weed, prune, train, and examine the soil; difficulties arising from the height they hang in the stove, conservatory, or greenhouse. It is true, all this can be done by a self-supporting step-ladder; but that is an awkward, clumsy expedient. That objection is now done away with by a simple, yet ingenious contrivance, invented by a youth, the son of my respected friend and neighbour, Mr. W. Rayner, Surgeon, of Uxbridge. This invention is on the principle by which the chandeliers in churches, chapels, and other buildings, where they are lighted with candles or gas, placed in, or on, what are called chandeliers. It is well known such things are balanced with weights; but Master Rayner balances his baskets with each other. Supposing the baskets are nine or ten feet apart, just over where one is to hang from the roof a pulley is fastened to the roof, and then, over the next adjoining basket, another pulley is fastened to the roof. Then a cord is drawn through each pulley, and each end of the cord is fastened to one of the two baskets. It is evident they balance each other, and thus, when one basket is pulled down to water the soil in it, the other rises up just as much as the other is pulled down. When the one pulled down has been watered, trained, &c., then the other is drawn down and similarly treated. When this second has had its due attention, and its wants supplied, then it is raised to its proper position, which action lets down its fellow. By this method, every basket can be carefully managed, the soil examined, stirred up, or fresh added, dead leaves removed, and, above all, regular, and easily-applied, sufficient quantities of water given to keep the soil well moistened. The only improvement I would suggest on this ingenious contrivance, is, to have each basket hung to a noose at the end of the cord, by means of a strong wire letter **S**; one end to go into the noose, and the other to catch the wire of the basket. Then two persons, one at each basket, could take them down, and give them a thorough wetting, by dipping the basket and soil in water, and allowing them to remain if very much dried. T. APPLEBY.

AGRICULTURAL STATISTICS OF SCOTLAND.—The report of the Highland Society to the Board of Trade, just published, shows that under the head of Scottish holdings rented at less than 10*l*., there are 16,144 occupiers, 77,732 arable acres, 25,698 cattle, 4,273 horses, 7,871 sheep, and 8,198 swine. Under the head of holdings rented at less than 20*l*., the number of occupants amounts to 26,085, the number of arable acres to 160,438, the cattle to 103,771, the horses to 24,735, the sheep to 141,561, and the swine to 17,481. The total gives a list of 42,229 occupiers of all holdings, 238,170 arable acres, 129,469 cattle, 29,008 horses, 149,432 sheep, and 26,399 swine. A separate return for Orkney gives the total number of imperial acres at 41,844½; of which about 13,517 are in tillage (only 7½ under wheat crop), and about 17,058 in grass, including 5,865 acres of sheep walks. The stock includes 1,424 horses, 2,078 milch cows, 2,696 other cattle, 1,891 calves, 5,612 ewes, gimmers, and ewe hogs; 2,125 tups, wethers, and wether hogs; and 1,396 swine. The gross produce of Orkney

in 1854 was 180 bushels of wheat, 5,727 of barley, 238,728 of oats, 108,168 of here, 210 of beans, 132 of peas, 39,230 tons of turnips, and 6,532 tons of potatoes. The average produce of wheat per acre is 24 bushels, of barley 39, and of oats 36 bushels. Owing to the number of petty occupiers to be dealt with, almost equalling that of the tenantry of the county, and the difficulty of finding the proper persons from whom to obtain information, the preparation of these returns has entailed a great amount of time and labour; but it is stated by Mr. Maxwell (who reports on the part of the Highland Society) that the public lies under a great obligation not only to the farmers officially engaged in conducting the inquiry, but to the many proprietors, agents, factors, poor inspectors, and others, through whose assistance the returns have been compiled. Every precaution has been taken to make them as accurate as possible.

CULTURE OF HARDY HEATHS.

THE greenhouse species of Heaths are deservedly great favourites, but the hardy ones are neglected. This I cannot understand, for they are beautiful objects, and well deserving of cultivation. A correspondent having made some inquiries about them, I have determined to write a paper or two on their culture, in order to remind the readers of *THE COTTAGE GARDENER* that there is a tribe of plants which, if a suitable situation and proper soil can be given them, would give a new feature to flower-gardening, and add to the attraction, besides increasing the interest and pleasure a flower-garden is so well fitted to create and afford.

We have Rose-gardens (and most beautiful they are this season); we have, as it is called, the American garden, amongst the plants of which we often see the hardy Heath used as a dwarf plant for the front of taller-growing species; but it is rare they are grown in beds by themselves, as they ought to be, in order to show the effect they are capable of giving. We have gardens, almost *ad infinitum*, on the bedding-out system, and why, let me ask, should we not have a Heath-garden? Certainly not for want of varieties of colour; for we have from pure white to dark purple, with all intermediate colours (with one exception, yellow). Then, the season of bloom extends over several months, from March to September, and during the rest of the year the plants are of the liveliest green, and require the least care of any plants we cultivate. Taking all these points into consideration, surely the hardy Heaths need no further recommendation from me.

SITUATION.—The Heaths, I mean (of which I will give a descriptive list) are all very hardy, and the greater part of them will bear the most exposed situation. The Heath-garden, then, may be situated almost anywhere. I can imagine a retired spot, surrounded very appropriately with rockwork, and further back with a belt of Spruce or Scotch Firs, the ground level, irregular, or sloping, but dry, and laid out in different sized beds, in any form the owner may fancy, with edgings of box (or even the small kind of Heath itself), and gravel walks between the beds; should turf be preferred, then a large bed in the centre should be allotted to the taller kinds, with smaller beds of the dwarf kinds surrounding it. In such a spot, the Heaths would form an interesting episode to the more gay parterre near the mansion. It might form a connecting link with mountain or forest scenery in its wildest state, and there are many seats of our nobility where such a scene might be created with the happiest effect.

A Villa-garden might be so laid out as to afford space for a small Heathery; but it should always be in a retired corner, and if connected with and in front of

rockwork would be very appropriate. Or it might form part of a spot devoted to the culture of British and foreign hardy Ferns. Two interesting subjects would then be combined.

SOIL.—There is, in many places, a difficulty in procuring the right soil for Heaths. In their native wilds they grow in a black kind of soil mixed naturally with sand and small stones. This, where it can be had, should be got, and beds made with it. Six inches deep of this soil would be ample pasture for the Heaths, their small, wiry roots seldom run deeper. Yet this soil is not absolutely necessary. I have some large plants of *Erica vagans* thriving well in a heavy, common loam, in which they were planted three years ago; a thin covering of the heath-mould was laid around the roots at the time of planting, and a covering of spent tanner's bark on the surface. Still, if I had the choice, I should prefer a thin layer of the soil in which they grow wild.

In whatever soil they are planted, a covering of the common green moss would be greatly beneficial, acting as a nonconductor both to heat, cold, and moisture; and, besides that, giving a picturesque and natural appearance to the Heathery, such as is difficult to conceive. I have used moss for this purpose for many years, and can confidently speak of its utility and beautiful appearance. Indeed, I wonder that moss is not used more largely than it is. In such a dry season as the present it would soon clear the expense of collecting and laying it on, in saving, in a great degree, the labour of watering. More especially is it useful to newly-planted shrubs, especially *Azaleas*, *Kalmias*, *Rhododendrons*, and such like, as well as *Heaths*. Moss would save, also, a great depth of heath-mould. Plants requiring it would thrive equally well in half the depth. This I have repeatedly proved by experience. So that where moss abounds, or can be procured at a moderate price, the cultivator of hardy Heaths would act wisely to procure as much as would cover his beds with it; an inch thick would be sufficient. To keep it from blowing off at first, a few long rods laid upon it at five or six inches apart, and kept in their place with strong, hooked pegs, would answer the purpose. After the moss becomes settled with heavy rains it would not blow away.

PLANTING.—The best time to procure and plant hardy Heaths is as soon as the winter is fairly over, and mild, spring weather set in. Then see that the beds are duly prepared to receive the plants. If the situation is low and wet, the ground should be well drained, and the soil of the beds raised above the general level of the places. To keep it up, let the edge of the bed be formed with flints, or sand-stone, three or four inches high. These stones would be in keeping with the situation, and would keep the soil dry, besides raising the dwarfier plants nearer to the eye. If such a plan is adopted, an edging of the most dwarf varieties would help to hide the top of the stones, and would, as they grew, in time hang over and be exceedingly neat and beautiful.

Let the soil, whether it is the proper heath-mould or a compost approaching to it, be well broken down and thoroughly mixed. If, like the soil here, it is of a heavy texture, it would be greatly improved by being liberally mixed with decayed leaf-mould and sand. The beds, then, being in a good condition, prepare to put out the plants. I find it most convenient first to set the plants out on the surface of the bed, exactly in the places they are to occupy. They are more easily arranged done so than if planted out one by one in a sort of haphazard manner.

The next consideration is grouping the varieties, which I must defer to another opportunity, my allotted space being full.

T. APPLEBY.

(To be continued.)

A TALE OF TRIALS.

By the Authoress of "My Flowers."

WHEN we look round upon the social world in which we dwell—upon those whose history may reach us from other sources—or even upon life, as described in popular works, the ground-work of such tales being usually drawn from facts—in every view we take of human nature we are sure to find trials, sufferings, or disagreeables. The fallen estate of man prevents his ever being really happy, until he is called into the state of grace, when his desires and affections being all raised from earth, and pointed to heaven, worldly influences are weakened, and spiritual influences are given, which lift him so much above the concerns of earth, that what distracted, vexed, and painfully affected him before, loses its power over his mind, and he is brought into that "peace and joy in believing," which only can be called true happiness. Nevertheless, trials, sorrows, and difficulties attend the steps of the most rejoicing believer, though they do not intermeddle with his joys. There is a needs-be for every one of them, even to him; and while he is in the world he must share the common lot of fallen nature. There are, however, sometimes, cases of uncommon trial brought before us. Some seem set apart for peculiar chastening, in the wise, but inscrutable providence of God; and we are bound, if we cannot always perceive the reason of such dealings, to use the lesson for our own benefit. It should teach us, at least, to be thankful, and humbled under our lesser trials; to bless the Hand that more lightly presses upon us; and to carry our crosses cheerfully and actively, that we neglect not the greater advantages we so eminently possess. I am going to present to my readers the outline of a life, that, from childhood to old age, has been one of almost unvaried trial, and I trust it may be profitable to us all.

Mary Waller was left an orphan in her infancy, and was brought up in the family of her uncle, General S—. She was totally unprovided for; in fact, as destitute as a pauper's child; but she grew up among kind cousins, and felt, perhaps, as little of her dependence as she could well feel during her uncle's life. At his death, she passed into the hands of one of his married daughters, with whom she resided. She had many attached friends, for her character was amiable; and, although so purely penniless, she passed from one to the other, receiving food and raiment at their hands, and doing everything she could in return, to show her grateful feelings. Few trials are so heavy to bear as total dependence; but Mary supported it with sweetness and patience; and every one loved to have her, and always sent for her in time of trouble to nurse or comfort them. At last a gleam of sunshine broke out, by a legacy being left her, which, though trifling, enabled her to possess something she could call her own; but, alas! it was but a way to deepen the after-darkness. The person entrusted with the payment of the scanty provision betrayed his trust, and poor Mary lost her little riches, and was thrown back upon her former dependence, having tasted the sweetness of her own little pocket-money just long enough to miss it.

There was something particularly melancholy in Mary Waller's path through life, inasmuch as that her friends were one by one taken away from her; she seemed to dwell in the valley of the shadow of death, for wherever she went, she received the parting breath of one she loved. All her cousins, excepting two, were taken away, and many friends besides; and in almost every case her kind and gentle hand closed their eyes. For some years she resided, still dependently, with one of those relatives, the wife of a clergyman; and with this quiet couple she advanced into middle life. Mrs. C— was to be another exemplification of poor Mary's peculiar calling. She suffered from that most dreadful of all maladies, a cancer. For many months she was watched over, and waited on, by her sympathising cousin, till the painful and distressing termination again tore from poor Mary's heart an affectionate and tried friend. Mrs. C—, however, left, out of her small means, a few hundred pounds to Mary, subject, of course, to her husband's life, to whom Mary performed a daughter's part during the very short time he survived his wife. He was a man of much learning, but child-like inaptitude for all other things; and when his right hand and stay was taken from him, he soon faded and

died. Mary had now to seek a home, with *thirteen* pounds a year, the interest of the small legacy her cousin left. It was, indeed, for a lady, by birth and breeding, but absolute starvation; nevertheless, the Lord stretched forth His hand and helped her. The daughter of an old and dear friend of Mary's youth was enabled, at this very time, to remember her mother's early friend, and she added twenty pounds a year to her slight means. Mary now felt affluent—yes, *affluent*; and never did a generous heart bestow assistance upon one more deeply grateful. She now set herself busily to work to manage her riches with close economy; and she chose her home with two ladies of small means, who kept a school. With them she boarded and lodged whenever she was at liberty; but her friends loved her, and always kept her long; so that twenty pounds a year sufficed to support her for the short periods she was in her little lodging, and made a trifling remuneration to her landladies. She was always charmed to be among her friends—and now she could enjoy it doubly, because she could say and feel that she came to *see* them, and not live upon their bounty. Dear reader, whatever your trials are, can you say you have *a home*? that you are not a burden upon others? If so, happy are ye! Human nature is so “desperately wicked,” that there are very few persons fit to be entrusted with power over any of their fellow-creatures. It is very, very seldom, that a dependant person is not made to feel their position very painfully, and no dependance is so trying as that of a poor relation, or a “decayed gentlewoman,” or one receiving the bounty of others. An educated mind feels so sensitively any want of delicacy or consideration in treatment and manner, and yet cannot defend itself, or get away from the yoke of bondage!

In these cases, as in all others, refuge can only be found beneath the shadow of Almighty wings. If we have a simple and full dependance upon *Him*, it makes our other dependance comparatively light. If we can but *carry* our cross instead of *dragging* it, that is, if we can but cheerfully and submissively meet the trials allotted to us, we should not feel them half so heavy and oppressive. But there is only one feeling that can enable us to carry our cross, and that is, seeing *Who* has laid it upon us; what Hand it is that “presseth us sore;” Whose wisdom and love metes out the portion that is best for us. Man, after all, is but the agent, the instrument, the servant who does his Lord's bidding—this it is that not only silences but satisfies the true believer—this it is that caused David to exclaim, when Shimei cursed him and cast stones upon him, “Let him alone, and let him curse, for the Lord hath bidden him.” Nothing that happens, however bitter, is the effect of *chance* or *misfortune*; all are the gracious purposes of a loving Father, who is training His children for a glorious eternity, and giving to each a portion according to his need.

Mary Waller's story is not yet finished. In my next paper, I shall carry on the trials that were still seen good for her, and under which she is still abiding. May they tend to both writer's and reader's spiritual profit.

NOTES FROM PARIS.

PARIS has been inundated with flowers for the last two or three days, but yesterday in particular, owing to the anniversary of *St. Pierre*, on which occasion all persons bearing the name of this Saint are presented with a bouquet, and receive the felicitations of their friends. As *Pierre* happens to be one of the commonest names in France, an immense number of flowers are everywhere in request for the 29th of June. On that and the preceding day, the markets, it would seem, are not large enough, and in the morning, every available corner is occupied with growing and cut-flowers, for which eager customers are not long wanting. Everywhere you see people carrying bouquets and flowers in pots. Porters with heavy loads of flowers are to be seen in every street, and even cabs, with several dozens on their tops, may be seen hurrying along from time to time.

Happy is he whose name is *Pierre*! On one day, at least, out of the three-hundred-and-sixty five, he occupies the place of honour throughout all France.

The weather, up to about the 20th, was remarkably wet

and cold, but for the last eight or ten days it has been very dry and warm. To-day (June 29) the glass is at 33° *Reaumer*.

The markets are well supplied at present with Strawberries and Cherries, very good in quality and very cheap. According to the dealers here, the best of the Cherries (very like the *Biggareau*) is called the *Cerise Anglaise*. The Strawberry most common is a variety in the way of *Keens' Seedling*. It may be had at present so low as 3d. a pound. A small variety of Apricot, called *Plein vert*, has been in the market some weeks. With this, may be mentioned a pretty yellow Pear, not much larger than a Cherry, but having an agreeable taste. This is called *Blanquette*. White Currants are now somewhat abundant, and may be had very good at about 3d. a pound. Green Gooseberries are to be seen occasionally in the principal markets. Of vegetables there is a great abundance of every kind. Green Peas are now very cheap; Cauliflowers, also, which seem to get larger every day, are now within the reach of everybody. This delicious vegetable, as grown here, is commonly from eight to twelve inches in diameter, and I have seen some samples still larger, yet the heads are as firm and the flavour as good as in the smaller varieties. French Beans, Love Apples, and Artichokes, have been in season for some time. Green Almonds may be occasionally seen in the shops. This fruit is used here in cookery, as a kind of *entre met*, in a green state. It is also prepared as a *fruit glacé* for the dessert, along with Apricots, Plums, Cherries, Figs, and other small kinds, including a small variety of Orange called *Chinois*. The *fruits glacés* being enveloped in candid sugar, are delicious as a dessert, and enter largely into the consumption of the rich. The preparation of fruits in this way is a kind of business, which is often joined to that of confectioner. Several sorts of vegetables, also, as Angelica, are preserved in sugar for the dessert.

In the flower-markets and shops there is a rich and varied display at present; but Roses take the lead. Magnolias, Gardenias, Cacti, Pelargoniums, and Azaleas, come next. Oranges, Myrtles, and Kalmias, are just coming into season. Bouquets, it might be supposed, would be composed of a great many varieties, but this is not the case at present; for the best I have seen are made up chiefly of Roses, Pansies, Heliotropes, and Pinks. Two or three Roses occupy the centre; the first circle is composed of Pansies and Heliotropes alternating, then a Rose, half expanded, and raised a little, is placed at regular distances; the second circle is of Mignonette and Pinks, the latter alternating in colour; the next circle is formed of Pansies, Orange-blossom, and Roses alternating; the Roses in every case few, half-open, and a little raised over the other flowers. The other circles are made up in nearly the same manner to any number desired; and the Ferns at the outside are but slightly raised.

The Orange-trees at the Imperial Gardens are now in full flower, and have a very agreeable effect. To give an idea of the number of these trees contained in the five Imperial Gardens in and near Paris, I may mention, that in the Tuileries alone there are not fewer than one hundred and seventy, nearly all about sixteen feet high, and having stems from ten to twelve inches in diameter. The Emperor derives a considerable revenue from the sale of the flowers, for the gathering of which sealed offers are received at the Hotel de Ville about the middle of June.

As yet there has been nothing remarkable in the Horticultural Exhibition here, as regards the cultivation of plants. The principal house is occupied chiefly with Palms and other miscellaneous plants. A few Orchids have been sent by M. Pescatore, of Versailles, one or two of which are worth mention, as *Cattleya Mossæi*, *Saccolabium guttatum*, *Vanda tricolor*, and *Odontoglossum Pescatorei*. The plants in this collection, however, are in general small, and but poorly grown. Messrs. Perrier, amateurs, at Epernay, have a fine collection of miscellaneous plants, as *Agathophyllum aromaticum*, several species of *Aralia*, *Coccoloba pubescens*, remarkable for its broad, round leaves, which in one plant are fully three feet in diameter. At one side of this house is a recess arranged as a rockwork, which is appropriately studded with such plants as require a moist, shady place. The central part of this house is occupied with good examples of such plants as *Laurus Cinamomum*, *Ropala*

corcovadensis, *Cycas revoluta*, *Sabal Adansonii*, *Posoqueria longiflora*, *Pandanus utilis*, and *Xanthochymus tinctorius*. The principal contributors here, with those already mentioned, are Messrs. Verdier, M. Chantin, Messrs. Thebaut and Keteleere, M. Ryfkogel, of Paris, and M. Dalliere, of Gand; the latter has shown a good example of *Asplenium nidus avis*, about four feet in diameter.

The Aquarium was somewhat late in being finished, and as yet contains nothing worthy of note. I may observe, however, that the house is neatly constructed, as are also the other three structures in glass, which are filled with Pelargoniums, Azaleas, Calceolarias, and similar kinds. The plants are placed on the floor, slightly raised with earth, in which the pots are partly embedded, and, as might be expected, after remaining a few days, they become much drawn. There are several tents in the form of Chinese pagodas filled with similar kinds. I have not yet seen a single Heath. Some clumps of the old varieties of Rhododendron have been the principal attraction out-of-doors, together with some very pretty beds of Roses and Annuals arranged in circles like a bouquet. This style of flower-bed has an excellent effect, and it admits of being carried to a great length. The general form of the bed may be round or oval, but the ground is much raised towards the centre, where a large and striking plant is placed; this is immediately surrounded with other plants large enough to cover the pot and stem; the circles are then continued towards the circumference, which is formed by a sloping band of turf about two feet wide. On a large scale, a fountain in the centre, and a back ground of foliage, this circular style of bed cannot fail to be the gem of a flower-garden.—P. F. KEIR.

NEW PLANTS.

CEREUS LEMAIRII (*Lemaire's Cereus*).

This is a native, probably, of Antigua. It is night-blooming and fragrant. Flower very large, being one foot long and nine inches across. The petals are white, and calyx yellow. It requires a stove, and blooms in June. (*Botanical Magazine*, t. 4814.)

CEANOTHUS PAPILLOUS (*Pimpled Ceanothus*).

A hardy shrub from California, where it was discovered by that martyr of Science, Mr. Douglas, but introduced into our gardens by Messrs. Veitch, of Exeter and Chelsea Nurseries, who received it from Mr. W. Lobb. It produces, in July, very numerous blue-petaled heads of flowers. It is a very desirable garden plant. (*Ibid.* 4815.)

KNIPHOFIA UVARIA (*Saw-edged-leaved Kniphofia*).

Long but erroneously known as *Tritoma uvaria*; but it has had many other names, such as *Tritomanthe*, *Aloe*, *Aletris*, and *Veltheimia*. It is of the natural order of *Asphodels*. The leaves thin and three feet long, grow in thick tufts; the flower-stems are about the same length, each crowned with a dense, branched, drooping spike of bright red flowers gradually becoming yellow. "Although a native of the Cape of Good Hope, no plant can be more hardy, nor more easily cultivated, and, assuredly, none more worthy of a place in every garden." It blooms in August. (*Ibid.* 4816.)

HYPONIS LATIFOLIA (*Broad-leaved Hypoxis*).

Introduced, in 1854, by Captain Garden of the 46th Regiment, from Natal. It has a bulb-shaped tuber, about the size and colour of a small greened Turnip. The leaves, about six inches long, rise from it like those of a Leek, and from their axils come the flower-stalks terminating in bunches of yellow flowers. It will probably prove hardy. (*Ibid.* 4817.)

BEFARIA ÆSTUANS (*Glowing Befaria*).

This has been also called *Acuna oblonga*. It is a native of the Andes Mountains in South America, where it was found by Mr. W. Lobb at about 8000 feet above the sea. It is a hardy greenhouse shrub. The name of the genus is also spelt *Bejaria*, under which it will be found in THE COTTAGE GARDENERS' DICTIONARY. (*Ibid.* 4818.)

THE CATAWBA GRAPE.

THE Catawba Grape was first discovered near Asheville, in Buncombe county, North Carolina; in the south-western corner of the State, near the head waters of the Catawba river. It was found by a Mr. Murray, about the year 1801; the Grapes were growing wild in the woods, in the greatest profusion. Gen. Davy, a senator in congress, living at Rocky Mount, on the Catawba river, transplanted some of these Grapes to his residence, and from thence took a few plants with him to Washington, during the period of his senatorship—some time prior to 1816. From, or through him, the distinguished Major Adlum obtained some of the plants, and was the first person who made wine from them—about 1822. In 1823 he sent some of the plants, with specimens of this wine, to Mr. Longworth, of Cincinnati, to whom we are thus indebted for its first introduction in the West.

There are several other varieties of native Grapes from which small quantities of wine are made, but they are generally inferior in many respects to the Catawba; from the wine of this Grape, which has undergone simple fermentation, is made the celebrated "sparkling wine" first introduced to the world at Cincinnati, in which vicinity there is at the present time near fifteen hundred acres in cultivation, producing an average yield of three hundred gallons to the acre; during the past season some have realised as high as five hundred, seven hundred, eight hundred, and eight-hundred-and-fifty gallons to the acre. Our success in producing wine from this Grape is in some measure to be attributed to the greater length of our seasons and the character of our soil in this vicinity; it being absolutely necessary to make wine from this or any other Grape, that it should reach the degree of ripeness or maturity which furnishes the requisite amount of sugar or saccharine matter to preserve the wine by its conversion into alcohol in the process of fermentation. Grapes may be considered ripe enough for eating which would not do for wine making.—*Cincinnati Paper*.

MITRARIA COCCINEA CULTURE.

HAVING seen an article in one of your former numbers respecting the flowering of the *Mitraria coccinea*, I beg to forward you the mode I have adopted with its culture, which has been successful; as the plant in question has been completely loaded with its fine scarlet flowers. The way I treated it was this: after blooming it last year, I turned it out of the pot, and found the roots very healthy; I shook off part of the old soil, and gave it a pot two sizes larger than the one it was in. The compost I used was equal parts of rough fibrous peat, leaf-mould, and loam, well mixed up together; with this treatment it has flowered most abundantly. The plant is supposed to be hardy, but it does not stand so well here out-of-doors in winter; they do well in a cold greenhouse. It is a plant entitled to be in every collection of greenhouse plants, however small.

If you think the above worthy of insertion in your valuable COTTAGE GARDENER you are at liberty to do so.—W. RUSHFORTH, *Mr. Kearsley's Nurseries, Leeds*.

ORANGE WINE.

TAKE 10 gallons of water, 28 lbs. lump-sugar, 5 doz. Seville oranges, the whites of 6 eggs, 1 oz. isinglass, ½ oz. cochineal, and 2 qts. of brandy. Peel the oranges as thinly as possible, carefully preserving the peel. Divide them and squeeze out the juice. Put the squeezed pulps into a tub, and on them pour the 10 gallons of water. Let them remain in soak for one night, then strain it, and if you find that you have lost any of it in the soaking, then make up the deficiency by adding more water. Having the sugar broken in small pieces, add it to the water, taking care that it be well dissolved before putting the liquor on the fire. Take the whites of the eggs, and beat them into a froth, and put them in the sweetened liquor. Boil one hour, stirring frequently,

and removing the scum. At the expiration of an hour, pour the boiling liquor through a sieve on the peel, and when nearly cold add the strained orange-juice and a yeast toast. Leave it twenty-four hours; remove the toast, and let it stand another twenty-four hours. Tun it with the peels, reserving two quarts, in one of which dissolve the cochineal, previously well-pounded; in the other quart add the isinglass, put it in the barrel when both are cold; well stir both together; leave it without bunging for a fortnight, then add the brandy; stir it well, and bung it up closely.—E. T., Bath.

I FORWARD you a receipt for making Orange Wine, which I expect "Fanny" and others will approve of.
Boil six gallons of spring-water with twelve pounds of loaf-sugar for three-quarters-of-an-hour, with the whites of ten eggs, well beaten; when cold, put into the liquor six spoonfuls of yeast; take the juice of twelve lemons, which, being pared, must stand with two pounds of sugar in a tankard, and in the morning skim off the top and put it in the water. Then add the juice and rind of fifty Oranges, but not the white part of the rinds; let them all work together for forty-eight hours; then add two quarts of Rhenish or White wine, and put it into the cask.—F. R. W.

A NATURAL FLOWER-GARDEN.

THINKING it may be interesting to you to hear, as well as it was to me to see, I beg to say that I recently saw, planted by nature, on the margin of a muddy moat, near the ruins of an old episcopal palace here, a beautiful circle, as uniform and complete as any gardener could have done it, of the large yellow flowers of which I enclose you a specimen. The circle was about three feet in diameter, the centre being filled for about a foot wide with the luxuriant and glossy foliage. I counted upwards of one-hundred-and-twenty blossoms in the circumference,—a perfect blaze of radiant, golden light, which attracted the attention and admiration of several other persons as well as myself.
I am induced to trouble you with a specimen of the plant, because, though rather common in the meadows here, it bears a variety of names, such as large Buttercup, Water Crowfoot, Anemone, Marsh Marygold, &c., therefore, it would be very satisfactory if you could oblige me with the scientific and English names of the plant in your valuable COTTAGE GARDENER. I also inclose a small, neat-looking spike-flower, for the name of which I will at the same time venture to trouble you. It grows in moist pasture ground.—T. M. W.

[The yellow flower is *Calltha palustris*, and the "neat-looking spike-flower" is *Polygonum Bistorta*, the Common *Bistort*].

IVY AT BISHOPS' WALTHAM PALACE.

IN reference to Mr. Beaton's interesting dissertation on Ivy, No. 347, page 120, I beg to mention the Ivy on the ruins of the Episcopal Palace, Bishops' Waltham, (which, no doubt, you have seen), and I would notice particularly that which is growing on the western side of the tower, which, still majestic in its decay, is, I believe, rather more than forty feet high, and about twenty feet in width, standing on the inside of the ancient moat that once surrounded this princely pile, and still remains on three sides of its venerable ruin.
The tower is three stories high, and the places of the ancient windows, that once illumed as many spacious rooms, still remain. In the uppermost of these rooms it is said the illustrious and far-famed William of Wykeham, then Bishop of Winchester, breathed his last, on or about the 27th of September, 1404, this having been "his favourite residence."
The ivy, springing from one solitary stem, near the centre of the western side of this tower, spreads evenly and beautifully over the whole width, and has nearly reached the summit, completely covering the wall, with its close and

small green leaves, as handsomely as even Mr. Beaton himself could wish, and in the very manner that he so graphically describes what it ought to be; and that without the least management or attention, or the pruning hand of man.
To add to the natural beauty of this scene, there is on the lower window place of the tower, a Wild Rose, which every summer is resplendent with numerous gay pink and white blossoms; and it has suggested the idea that the Lady of the last Bishop who resided there, might, in her haste, when driven out of her Palace by Oliver Cromwell's remorseless troops (who demolished the building), have left her favourite flower in the window, where it has continued to flourish and bloom ever since, out-braving the persecution and neglect of more than two centuries!
T. M. W.

TABLE SHOWING THE MEAN TEMPERATURE DURING JANUARY, FEBRUARY, MARCH, AND APRIL, 1855.

Locality.	Jan.	Feb.	March	April	Daily Mean each locality.	Daily Mean each country.
ENGLAND.						
Greenwich	34.5	29.5	38.5	46.5	37.25	} 37.15
Nottingham	35.0	28.0	37.0	44.5	36.12	
Hawarden	30.5	29.5	39.0	46.5	36.37	
Exeter	37.0	31.0	40.5	47.0	38.87	
IRELAND.						
Dublin	40.0	34.5	42.0	49.0	41.37	} 39.29
Cork	42.0	35.5	43.0	50.0	42.62	
Portarlington ..	37.5	29.0	40.0	41.0	36.87	
Armagh	37.0	31.0	38.5	47.0	38.37	
Sligo	36.0	30.5	38.0	44.5	37.25	
SCOTLAND.						
Glasgow	34.5	29.0	37.0	43.0	35.87	} 37.06
Annatholm	37.0	32.0	38.5	45.5	38.25	

Mean daily Temperature during the last four months—viz., from the 1st January to the 31st April, was as follows:—England, 37.15; Ireland, 39.29; and Scotland, 37.06. Daily Mean for the United Kingdom, 37.82.—*Albnuitt's Irish Land Schedule*.

PRESCOT EXHIBITION OF POULTRY.

AT no previous Show of Poultry held in the extensive county of Lancashire, has the collection been superior to that which took place at Prescott, on Wednesday, the 4th inst. The most untiring efforts of the committee had been made to render the arrangements effective, and we are glad to find they had every hope gratified. The exhibition was not remarkable as to numbers of competing pens, but the quality of the stock shown was very superior indeed, if, perhaps, we make one single exception, for which (from the locality) our readers will be scarcely prepared, viz., the Silver Pencilled Hamburgs.—The remaining classes for these varieties were excellent in point of quality, and were also well filled.
The day, by prior arrangement, seems to have been devoted to the purposes of a general holiday; all the manufactories and most of the principal shops being closed from midday, the hour at which the exhibition was opened to the public; indeed, large printed placards had been exposed to view in most of the windows for several days previously, acquainting customers of the intention of the proprietors to relinquish the cares and toils of business on the afternoon we have just referred to. To render the matter more generally popular and notorious in the surrounding neighbourhood, from midday the bells of the parish

church rang loudly for hours; banners were very numerous displayed, and a local band perambulated the town, eventually settling itself in a tent provided for the purpose near the outskirts of the exhibition-field. The aristocracy of the neighbourhood attended in considerable force, and the numbers of carriages and pedestrians who crowded the way to the exhibition were very great, many of the latter having arrived by railway from the densely-populated districts of Manchester and Liverpool. Such, indeed, was the courtesy of the Directors of the London and North-Western Railway Company, that not only were additional trains placed on the lines, for the express accommodation of visitors to Prescott, but even the express trains, *for this day*, were ordered to "put down" passengers at Rain Hill Station, which, though the nearest point, was fully two miles from the Poultry Show. The numbers who availed themselves of the cheap trains were extraordinary, and it was only after much "packing and settling down" that the omnibuses employed for the intervening distance could (though many were in waiting at the station) accommodate the travellers on their exit from the trains: hence pedestrianism was, by not a few, the order of the day; and, though a brilliant sunshine added greatly to the fatigues of walking, the whole road to Prescott was constantly studded with passers-by, who were the subject of much merriment to those closely (we cannot say comfortably) ensconced on the tops, and in the insides of the various vehicles.

On entering the tents of Poultry the general appearance was light and airy, the pens being those well known to most poultry amateurs, as Messrs. Greening's Exhibition Pens, and which had been hired by the committee for this particular occasion. These pens, for the inspection of poultry, are undoubtedly possessed of many advantages; but the liability of fowls to injury from fighting with those immediately around them, appear far more imminent than in coops of a less open construction; several disabled Game Hens were placed beneath in empty baskets, their heads having been literally scalped by their infuriated neighbours; whilst their own chances of success, at either the present, or future poultry exhibitions, have, by such unhappy contingency, been very distantly removed.

Perhaps, as a whole, the *Game* classes have very rarely been equalled, but many, that individually were most excellent birds, lost caste altogether, from the oversight we have so frequently exposed in the pages of this periodical; we allude to the careless inattention to the *colour* of the legs of every fowl in the same pen. Such mis-selection, we emphatically repeat, must always prove altogether fatal to the hopes of any party who aspires to honours in the Game classes. It is absolutely imperative that the colour of the legs of the whole pen must closely assimilate.

The *Dorkings* were very extraordinary, and, by reference to the Prize List, our readers will see the credit of mastery was not by any means an uncontested one. The same may with like truth be said of the *Black Spanish* and *Hamburgs* of the spangled variety. The *Polish* fowls were good, but not so superior as those we have just mentioned. The *Bantam* classes were excellent; and here almost all the prizes were literally monopolised by Gilbert Moss, Esq., of the Liverpool Bank. Among this gentleman's valuable selection of these Lilliputian varieties, a pen of *Game Bantams* were universally admired; and we are informed, though frequently exhibited, they have never yet failed to obtain first premiums, being a variety as uncommon as they are prepossessing in their general appearance. The *Ducks* were decidedly far better than ordinary. The *Geese* were also especially good; the first prize, *Emdens*, the property of Captain Hornby, of Knowsley Cottage, being birds of a size that is very unusual, and shown in the condition for which this well-known amateur's stock is everywhere proverbial. The wild American *Turkeys*, belonging to the same gentleman, were equally good, and their plumage was excellent. The *Pigeons*, whilst as a whole, perhaps, one of the most attractive in the whole Exhibition, contained two pairs of a decidedly unique variety, originally from the Canadas, but perfectly domesticated; and we are informed by their owner, Francis Worrall, Esq., of Knotty Ash, near Liverpool, they have proved excellent breeders. They once formed part of the much-celebrated Knowsley collection, belonging to the late Earl of Derby, and were purchased by

their present owner at the sale of that nobleman. In size, they are triflingly larger than a common Pigeon; but it is in the strange eccentricity of their markings that their peculiarities chiefly consist. The whole of the body, the tail, and the crop, together with the throat, are purely white; whilst the wings, back part of the neck, and upper surface of the head, are covered with feathers of a most intensely black hue. Down either side of the neck, and along the cheeks, a line of distinct demarcation exists, as palpable as though drawn purposely with a pencil; not the slightest shading from the one to the other of these opposite colours being visible anywhere. This gives the birds, at first sight, a most artificial appearance. The eyes are similar to the Barb Pigeon, but very decidedly larger. These Pigeons were entered under the name of *Taylors*, which was the name received with them from America. During the whole exhibition, the avenue in which these birds were shown was thronged to excess.

The Judge of Poultry appointed for the occasion was Edward Hewitt, Esq., of Eden Cottage, Spark Brook, near Birmingham. We gave the Prize List last week.

CATERPILLARS ON CURRANTS AND GOOSE-BERRIES.

HAD not I bestowed a large amount of time about my Gooseberry and Currant bushes, they would, before this, have shared the fate of some of Mr. Errington's; and even with all my vigilance I began to despair; for, notwithstanding a constant picking them off, like the horse-leech's daughter, they still cried "more." But I have just administered to them their quietus by the aid of the Dutch-hoe and a goose's wing.

Now, observe, my clever young friend, this piece of wood, six inches long; it is screwed firmly on to the end of the handle of the hoe in the form of the letter **T**, which, without previously touching the bush to put the vermin on their guard, allows me to aim a sudden, straightforward blow at the stem. The caterpillars thus taken unawares, many of them fall off from the concussion; but for those which do not you may strike away as long as you like; they have secured themselves, in a moment, fast enough; but with the point of this *new* goose's wing, lightly and dexterously passed amongst and about the branches and leaves, all and every insect that is there must, and do, as you perceive, fall to the ground, whereupon a pounding with the back of the blade of the hoe, and then a scuffling with the same, kills the weeds, and completes the destruction of all those caterpillars at the same time. Scarcely one remains alive, and the bushes are safe from those plagues for the future. I have destroyed as many by this method, during two or three hours, as the winter did of our soldiers in the Crimea! Moreover, I have used the wing about the trees against the wall, and even the standard Roses, displacing all the yellow leaves, &c., from amongst them; and the Currants against the wall have been most particularly benefited, looking clean, fresh, and invigorated, as if they had just experienced a storm of wind and rain: and from amongst Cauliflowers and its tribe, an active boy could soon clear a garden of their most destructive enemies in like manner. I shall send this idea flying for the benefit of the readers of the COTTAGE GARDENER this very day, for woful is the destruction caused by these pests this season.

My Gooseberries are trained on the flat table trellis fashion (each bush, from a single stem, rising ten inches from the ground), in a row by the side of the principal walk in the garden, and between every tree a half-standard Rose is planted. The Roses, now in full bloom, contrast and shew themselves well above the green, flat foliage carpeting of the Gooseberries, and viewed from the top or bottom of the walk they have a remarkably pleasing effect; and below all, such a crop of fruit I have seldom seen.—UPWARDS AND ONWARDS.

DERIVATION OF NEMOPHILA. — HOW TO DESTROY CRICKETS?

THE controversy in your pages on the proper spelling and derivation of *Nemophila*, or *Nemophylla*, has assumed dimensions of which I at first little thought it capable. I have, myself, always believed *Nemophylla* to be the correct spelling, and have taught many others the same, assigning as a reason that the word was truly descriptive of the plant, which *Nemophila* was not. In our sunless clime, at least, all the species that I am acquainted with seem to bloom and flourish in the open sunshine so luxuriantly, that I cannot imagine their being such lovers of the shade as *Nemophila* would indicate. Whilst *νεμω*, which means (in fact, its first meaning in *Donnegan's Lexicon* is) to partition, does accurately describe the arrangement or form of the leaf, viz., deeply serrated or divided on each side, almost up to the mid-rib.

But I have a still more formidable difficulty to suggest to the advocates of *Nemophila*. I would ask, if their derivation of *νεμος* and *φιλέω* be correct, from what part of the verb *φιλέω* do they form their compound? If that were the correct derivation, the name of the plant would, I suspect, be *Nemophilon Insigne*, *Maculatum*, or whatever else might be the specific name—*philon* being taken as the English equivalent for *φιλον*, the third person, irregular number, nominative case, of the participle; or, still better, of the adjective *φίλος*; but *Nemophylla* is a regular and proper compound of the words from which it is derived. Once more, I have looked into two *Lexicons*, and the *Indices* to *Homer's Iliad* and *Odyssey*, and do not find in any of them "*νεμος*, a pasture or grove," nor the word *νεμος* at all.

I wish now to ask a question on a very different subject. Can you, or any of your readers, inform me what will destroy the common house-cricket, with which my house is becoming infested to a troublesome degree? Will "*Chase's Beetle Poison*," which I see advertised in your pages, and recommended in your last number, by "*C. W. J.*" for beetles?—*QUIS*.

HORTICULTURAL SOCIETY'S EXHIBITION.— JULY 11TH.

As if to pour out upon this Exhibition the superlative of ill-fortune, the day before and the day after were very fine, whereas the day of Exhibition was the wettest which has occurred this summer. We shall give our usual commentary next week, and for the present extract the following summary from a contemporary:—

The productions on exhibition—plants, fruits, and flowers—were as abundant and as maturely developed as on any previous occasion, and elicited the admiration of the visitors as warmly as ever. Music also lent its charms to the scene, which alone wanted a glimpse of sunshine to make it an Eden. But, despite every combination of art, the feeling of enjoyment was not visible. The atmospheric wet-blanket sensation was grievously prevalent, and the visitors, after a few courses through the exhibition tents, seemed particularly anxious to restore to themselves the comfort of their vehicles.

The principal awards were:—

First Gold Knightian Medal.—Messrs. Veitch, for orchids.

Second Gold Knightian.—Mrs. Ellis (Mr. Gidney, gardener); Mr. Ingram, gardener to her Majesty, for collection of fruit.

First Gold Banksian.—H. B. Ker, Esq. (Mr. Woolley, gardener); the Duke of Norfolk, F.H.S. (Mr. M'Ewen), for collection of fruit.

Second Gold Banksian.—W. F. G. Farmer, Esq., F.H.S. (Mr. Carson), for orchids.

Silver Gilt Medal.—Mr. Ker (Mr. Woolley), for orchids; Messrs. Veitch, for variegated plants, and also for plants with fine foliage; Mr. G. A. Watson, of Ealing, for collection of fruit; Mr. Harrison, of Oatlands, for Hamburgh grapes; Mr. Gaines, for fuchsias.

Large Silver Medal.—The Duke of Northumberland (Mr. Ivison), for orchids, also for nutmegs, vanilla, and musa; Messrs. Lea, for variegated plants; Messrs. Rollison, for plants with fine foliage; Mr. Farmer (Mr. Carson), for ferns; Lady Charlotte Schreiber (Mr. Jones), for Providence pine, 12lb. 3oz.; the Duke of Marlborough (Mr. Turnbull), for Cayenne pine, 4lb. 12oz., also for Muscat grapes, and also for peaches and nectarines; Mrs. Deacon (Mr. Gosling), for Queen pine, 4lb. 15oz.; Mr. J. Strahan, for Muscat grapes; W. Herbert, Esq. (Mr. Stent), for Hamburgh grapes; the Duke of Sutherland (Mr. Fleming), for Frontignan grapes, also for Mill-hill Hamburgh grapes; J. S. Crawley, Esq., for a new variety of grape, called Stockwood Golden Hamburgh, very fine; Mrs. Conway, for variegated geraniums.

First Silver Knightian Medal.—Mr. Dunsford, Chingford, for orchids; Messrs. Rollison, for variegated plants, also for ferns; Messrs. Henderson, Pine-apple Place, for plants with fine foliage; Mrs. Ellis (Mr. Gidney), for lycopods; Mr. Fleming, for Providence pine, 6lb. 12oz., also for Hamburgh grapes; H. C. Ingram, Esq., (Mr. Taylor), for Black Prince, 7 lb. 12 oz.; J. A. Houblon, Esq., (Mr. Spevey), for Queen pine, 4 lb. 10 oz.; the Right Hon. the Speaker, (Mr. Tilyard), for Frontignan grapes, also for Muscat, and also for Muscadine grapes; Mr. Mitchel, of Brighton, for Muscat grapes, also for peaches and nectarines; H. Akroyd, Esq., (Mr. Allport), for the like; Mr. Clarke of Hoddesdon, for the like; Sir W. Smith, Bart. (Mr. Mills), for peaches and nectarines; Earl Spencer (Mr. Judd), for peaches; J. Dickson, Esq. (Mr. Davies), for the like; Mr. Clements, Oakhill, for nectarines; Mr. Lydiard, for strawberries; Messrs. Lane, for fruit-trees, in pots; Mr. Mitchell, Pit-down, for cut roses; — M'Neil, Esq. (Mr. Wetherell), for verbenas; Mr. Turner, for pinks; Messrs. Veitch, for ixora floribunda—with a large number of silver Banksian and minor medals.—*Morning Herald*.

QUERIES AND ANSWERS.

GARDENING.

CLOTH OF GOLD ROSE.

"Why do you pass so sweeping a sentence on the *Cloth of Gold Rose*, as appears in page 97, of your last May number?"

—"In truth," say you, it is not "worth nails and shreds."

"But the other day this Rose was almost an object of universal emulation and desire. I own, I cannot see its worthlessness. I have one now against the south-front of my house, planted seven or eight years; it is thirty feet high, and covered profusely with flowers. In fact, it has not failed to bloom; and this, *unprotected*, in a high and somewhat cold situation; and to me it is a splendid flower. But this, and all other yellow Roses (though doing well otherwise) lose colour sadly. Can you suggest a remedy for this? They have plenty of manure, and are kept well drained. The manure is strong water from a dunghill, somewhat diluted.

"My *Cloth of Gold Rose* is becoming rather bare for six feet from the ground, owing to a caution "never to shorten the shoots." In any other Rose, I should cut it in severely at the top. Dare I do this with the *Cloth of Gold*? Your advice on the two points will be valuable.

"I hope the new plan of *propagating cuttings*, named at page 4 of the April number, will be given as promised.

"I can make nothing of *Jaune Desprez Rose*, likewise against my house. It makes so much wood, and flowers badly in consequence. Would not this Rose and *Cloth of Gold* make good climbers, trained round pillars in a greenhouse, making the curves frequent and near together, to check the exuberant growth? *Jaune Desprez* also loses colour, like all the yellow Roses.—*VERAX*."

[The reason why we passed so sweeping a sentence on the *Cloth of Gold Rose* is this, that "but the other day this Rose was almost an object of universal emulation and desire," and ten thousand people have been "taken in by it"—ourselves among the rest. It is true, that ten out of the ten thousand may have succeeded with it, as you have been so fortunate as to do; still we do not value it as worth nails and

shreds, for the million, or for general use. As a Rose-house climber, or for a cool conservatory, or an orchard-house kind of treatment, we have recommended it, and always will. All these yellow Roses want more sun to ripen the wood; our climate never does that, nor produce such yellow Roses as one sees in the south of France. We would not try experiments with your fine specimen of this Rose—better let well alone, and clothe the bottom with some other Rose. We cannot say if *Jaune Desprez* would do in a greenhouse. There is not the smallest fear about all the details for striking cuttings by the Waltonian case not being furnished in due time; and there is as little fear about its answering perfectly; but it is a very different thing to warn inventors, which is all we then intended, and to arrive at a just conclusion on an invention all at once. Suppose an experiment was necessary to decide some point in the management of Mr. Walton's case, such could be of little use in the height of summer. Pray have more patience, and go to no more expense for such things till you see the full details; but all the details are not settled yet.]

IS HUMEA ELEGANS A BIENNIAL?

"Having been a visitor at the late Liverpool Exhibition of Plants, &c., during my observations there came under my notice a collection of eight stove or greenhouse plants, disqualified on account of a large plant of *Humea elegans* being one of the number; a noble specimen, indeed, measuring ten feet in height and six yards in circumference, with about twenty branches coming away from the main stem, each branch averaging three feet six inches of flower, and some branches with flower almost to the pot edge. I have searched *The Cottage Gardeners' Dictionary*, and find it therein stated to be a greenhouse biennial. I should feel deeply obliged to you if you would give me your opinion, through the medium of your interesting work, *THE COTTAGE GARDENER*, at the earliest convenient opportunity.—A CONSTANT READER, *Liverpool*."

[*Humea elegans* is a greenhouse plant and a biennial. If the leaves were in good health on the plant you mention, the grower deserved an extra prize for it; but to place it among a collection of stove and greenhouse plants was injudicious; as, although strictly a plant not sufficiently hardy to stand the winter, it is never entered into competition with greenhouse plants. Balsams, Coxcombs, Hydrangeas, Humeas, Salpiglossis, Schizanthus, Salvias, and some others of that stamp, are beautiful things, and some of them, including the *Humea*, require far more skill to bring them to perfection than any of the usual run of stove and greenhouse plants seen at exhibitions; yet, that is not the question, which turns round and round like other fashions; but whether *Humea*, as a greenhouse plant, is fit to be associated with "greenhouse plants" for competition? It is not so, and never was, except, perhaps, in some obscure village. As a single specimen of rare horticultural skill, we have often awarded a medal for a *Humea*, worth four times the actual value of the plant; but we should have no hesitation in disqualifying a "collection" for it.—D. B.]

HETEROPTERYS NITIDA CULTURE—VITTADINIA LOBATA HARDY.

"You will oblige by giving a description of the shrub *Heteropterys nitida*, and its cultivation. Also, the name of a book treating about Australian shrubs. The *Vittadinia lobata* (Australian Daisy) has lived out the past winter, and is now growing very strong with me. I mention this, in case any of your readers would like to know it, as a doubt was expressed of its being more than an annual, or of its being hardy.—M."

[*Heteropterys nitida* is a tall-growing shrub, from the Brazils, with yellow flowers, not generally known nor cultivated. It requires the ordinary treatment of stove shrubs; that is, a heat of 65° to 75° in summer, and 10° lower in winter. It grows well in sandy loam and peat, mixed with half-decayed leaves and pieces of charcoal.

It is propagated by cuttings of half-ripened wood put into a pot half-filled with crocks, and upon them a layer of the

compost made very firm to within an inch of the top of the pot—that inch to be filled with the best silver sand that can be got. Then plant the cuttings, water them, and in an hour's time place over them a bell-glass high and wide enough to enclose without touching every leaf.

We are glad to learn that the pretty little *Vittadinia lobata* has proved hardy with you. There is no work lately published on Australian Plants. The only one we know is that by R. Sweet, published in 1828, under the name *Flora Australasica*.]

ONION GRUB—BUMBLE-FOOTED COCK.

"I have three beds of Onions, sown the third week in April, which have done exceedingly well till the last fortnight, when I found they began to die off, here and there one, and to my astonishment, last evening, on drawing one that was going off, I found no less than seven or eight maggot grubs in the bulb, a sufficient reason for their failing so fast. What must I do to save those that are not attacked? shall I transplant to another part of my garden? and can I do anything to destroy the maggot, which I suppose is the grub of the Onion Fly?

"I had a Cochinchina cock given me last week, with a very bad foot, and on examination, I found a hole penetrating between the toes and extending far back into the sole, which was much swollen, and on cleaning out the wound discharged a quantity of matter, which is again accumulating. What is the disease, and what the remedy? I fear an injury at first.—AMATEUR."

[You will have seen what was said about the *Onion Grub* in our last number.

Your Cochinchina fowl is *bumble-footed*. It often arises from treading violently on sharp stones. The following is said of this disease in *THE POULTRY BOOK*: "In very early cases we have removed the tumours and cauterized the part successfully with Nitrate of Silver (Lunar Caustic); but the adoption of low, broad perches, which prevent the birds coming with violence to the ground when descending is the best remedy, inasmuch, as that prevention is better than cure in all cases."

THE NATURAL HISTORY OF GUANO.

(Concluded from page 192.)

To stand at a distance and observe the movements of the birds in these rookeries is not only amusing, but edifying, and even affecting. The camp appears in continual motion, all appear engaged in seeking pleasure, refreshment, or recreation; at the same time the air is almost darkened by an immense number of albatrosses, and other birds, hovering over the rookery like a dense cloud, some continually lighting and meeting their companions, while others are continually rising and shaping their course for the sea.

Sea-fowl in incalculable flocks are observed to congregate for similar purposes everywhere on the desolate and craggy shores and islands of both the Atlantic and Pacific Oceans; and although the same species of birds are met with in many different latitudes, whose food is alike, and whose droppings can vary little in chemical character, whether this relates to their solubility, fluidity, or solidity, yet, as far as it has been discovered, there seems only very few situations where matter resembling guano, in any quantity, is found. The rocky islands and shores on the northern and western coast of Scotland, although they have been no doubt frequented for thousands of years by birds in countless numbers, yet are really known not to have any such deposit upon them; neither does it exist on the lonely islands in the Gulf of St. Lawrence, nor on the rocky shores of North America, in the higher latitudes, to which also vast flocks of sea-fowl migrate every season, to rear their young in fancied security, amidst an abundant supply of food, and where vessel-loads of their eggs are collected by visitors, by whom no report has as yet ever been made of the existence of guano. It must be inferred, from the acute and searching talent which Morrell shows for observation, that he would not have allowed the occurrence of guano on the Falkland Island, or on others equally the resort of sea-fowl, to have escaped him had it existed. He would have recorded the

fact in his description of the South Sea rookeries, and his far-seeing eye would not have failed to discover in mountains of this substance, monuments of production which, if not of a very pure nature, yet are of more real importance to mankind than what is so often recorded in the annals of other biped republics of higher intelligence, but of much less antiquity. It is obvious, therefore, that peculiar causes exist for the accumulation and preservation of the dung of those birds, in such enormous beds as cover some islands on the coast of Peru, Bolivia, and Africa; and we are not to look for these causes alone in the mere temperature of their climate. Many rocky islands and precipitous shores within the tropics, in full possession of the feathered tribes of the ocean, may have thus at least one physical cause existing without any such accumulation, and this could scarcely occur without being noted by the prying eye of man. In such climates, the heavy periodical rains, uncounteracted by other agency, must dissolve everything which is soluble of whatever is deposited on the surface of the earth, and what is not so dissolved would be otherwise, in all likelihood, washed away; the same must occur in temperate and colder climates, where the constant alteration of wetness and dryness, and of heat and cold, must rapidly effect a thorough decomposition, and facilitate greatly the disappearance of all such matters.

If we take a survey of the localities in which guano has hitherto been found in large quantities, we shall find causes in operation which will account for its accumulation.

The seaboard of Peru and Bolivia, from 3 deg. to 22 deg. south latitude, a space of about 1,480 miles in a direct line, is generally of a light, sandy soil, never refreshed by a drop of rain, and although the dews are heavy, they seem of little consequence to vegetation. On this coast are the numerous islands upon which take place large deposits of guano—on the islands of Chinchá and Pacuica, according to good authority, the beds are of great depth, and the quality exceedingly good; but on the coast of Chili, where rain frequently falls, the guano is inferior. Morrell, who seems to have visited most of those islands on the coast of Peru, makes mention of two islands named Lobos Afuero and Lobos de Terra: the latter is in latitude 6 deg. 34 min. S. and longitude 80 deg. 45 min. W. and has a safe and convenient harbour on the north side; “they are covered,” says he, “with the dung of aquatic birds, sufficient to load thousands of ships, having been accumulating for untold ages. It is called *guanar* by the Spaniards, and is probably the richest manure in the world.”

If we now turn to the coast of Africa, we shall find from the same author, that Ichaboe Island is covered to the depth of 25 feet with guano, and is within $1\frac{1}{2}$ miles from the main, and 41 miles to the northward of Possession Island, which is in latitude 26 deg. 57 min. S. longitude, 15 deg. 8 min. E. The south and west coast, from about latitude 16 deg. to 27 deg. south, is a dreary, sandy waste, generally destitute of water. The desert in the neighbourhood of Angra Pequena extends into the interior about forty miles, which, being traversed, a country is reached inhabited by an inoffensive and civil race of Hottentots, possessing, as you advance farther, innumerable flocks of cattle, where the land becomes fine and fertile.

About 800 miles of the sea-coast, Morrell says, running north-west and south-east, almost every mile of which was examined by him, presents a range of sandy deserts, upon an average nearly forty miles in breadth.

During ten months of the year here there is scarcely a drop of rain, and for the other two months very little falls. The atmosphere is pure, warm, and dry, to such a degree, that a quarter of fresh beef, weighing two hundred weight, hanging in the rigging, will become perfectly dry, without being tainted in the slightest degree, even to the bone.

Thus, to all appearances, there are identical agencies existing on the coasts of Peru and Africa, where guano is found of such superior quality and in such wonderful abundance.

For the deposition and accumulation, then, of guano, in any particular locality, it is essential that there should be a sea-coast on which there are numerous isolated rocky situations, where sea-fowl may collect unmolested to hatch their young, and seas in the vicinity supplying abundance of food; warmth of climate, little or no rain, and a perpetually

dry atmosphere. Under a terrestrial and atmospherical combination of this sort, Dr. M. Hamilton calculates that a million of birds will produce fifteen tons of guano daily, from their droppings, subject to no further loss from evaporation. No mean quantity would thus, in a very few years, be accumulated in favourable situations, and many such, it is reasonable to suppose, are to be found in both hemispheres.

We can foresee that the stimulus given by the success which has already attended the voyages for African guano, and the idea that the supply will soon be exhausted, both on the coast of Peru and Africa, must naturally lead to the exploration of new regions, for an article apparently every year growing more and more in request. It will, however, only be by looking to those topographical bearings referred to, that any one can expect to make fresh discoveries of deposits of this substance to an extent which will make them an object of commercial enterprise, or of a quality which will realize the hopes of the farmer.—*Dr. Jackson, in Farmer's Cabinet, U. S.*

[As we promised, we publish another sketch by the authoress of “Uncle Tom's Cabin.”]

SPRING BREATHINGS.

“How fresh, O Lord! how sweet and clean
Are thy returns! as flowers in spring,
To which, besides their own demean,
The late past frosts tributes of pleasure bring.
Grief melts away,
Like flowers in May,
As if there were no such cold thing.

“Who could have thought my shriveled heart
Could have recovered greenness? It was gone
Quite under ground, as flowers depart,
To see their mother root, where they have blown;
Where they together,
All the hard weather,
Dead to the world, keep house alone.”—HERBERT.

Not far from our stone cabin is a pile of rude gray rocks, carelessly thrown together, and hoary with mosses. Here and there in the clefts the crimson columbine hangs its tassels, and wild rose, saxifrage, and ferns combine to make a garland round and over them. The graceful white birch, with silvery stem and glancing leaves, keeps sentinel here arm in arm with the stunted and scraggy pitch pine. This white birch Lowell calls the “Dryad” of our woods, and it is in shape and feature the very personification of woodland elegance and grace. Its arrowy leaves are of a vivid and glossy yellowish green, and constantly glitter and shimmer on their long stems, as if pervaded by a tender and tremulous ecstasy of life, forming a singular contrast to the sullen and craggy immobility of the pitch pine, with which they are so frequently associated. The fair, polished white trunk, graceful and shapely, seems like a marble shaft in the greenness, and is a peculiarity wherever the tree appears in the landscape. One or two young elms, and a growth of young oaks also lend their shade to encompass these rocks, which have a history connected with them. Tradition whispers that this spot was, in former days, the trysting place where Samuel J. Mills and his companions met, while members of the Theological Seminary of Auburn, to nourish, by prayer and communion, that lovely vision of human brotherhood which has since carried the American missionary into every country of the earth. A generation has grown up since then, and we whose cradles were rocked by mothers in whose hearts the missionary spirit had become an absorbing enthusiasm, who were taught to pray and feel for every nation and tribe of earth as brethren, can scarce realize what was the labour to introduce that spirit into America, when missionary enterprises were deemed visionary and chimerical. Sad is it indeed that America, while doing this great work in foreign lands, has stood so indifferent to the sufferings of three millions of heathen in her own land; sad that the lukewarmness and inconsistency of the religious world on this subject has brought suspicion of the sincerity with which she seeks to convert the heathen of other shores. But while the lovers of foreign missions should not forget the American slave, neither should the abolitionist forget the heathen abroad, for both alike are brethren, and each is inconsistent who neglects either.

This spot, therefore, should be sacred to us as a shrine, and its woodland garlands, its shimmering leaves, its mosses, its flowers, speak of a more enduring beauty than anything in this world.

Behind this pile of rocks a thick forest stretches itself over the brow of the hill, and as you come near the rough fence and look in, it seems hopelessly impenetrable.

But a merry concerto of birds, and the distant waving of some anemones decides you to risk a predestined scratched face, and so after a clamber you come crashing down among the shrub-oaks and birches on the other side. A brisk twig gives you a smart cut over your face, a long armed black-berry bush tears off your sun-bonnet, and another lays hold of your arm as if it had teeth and claws. But after all, the bark of nature is worse than her bite, and after making a few pacific arrangements with your new friends, you push on and soon discover a broad, cleared path cut through the entire wood. Here you are then alone with nature, and God the father of it. The ground is now paven and dry with ever-falling pine leaves, now fringed with grasses, and checkered over with moving flecks and spots of sunshine and shadow. Either side the violets, not one alone, but a perfect border of them, of that large and beautiful kind which botanists call the pedate or birds-foot, and whose large flowers and delicately-cut leaf spring in careless profuseness from the driest and sandiest of soils. There is something quite affecting in the joyous abundance and pertinacity with which some very lovely flowers will grow in the poorest soils. They are missionaries of God's love, they delight in adorning waste places; you may transplant them to your trim garden, but you can never give them there the perfect abandon of beauty with which they will spring up out of a dry sand heap. Every moment you stop at some cluster of these flowers that seems to you fairer, more clearly cut, more finely coloured than the last. Some you admire for their pale and delicate tint, and some for their firm and decided colour, and ever and anon you say to yourself, the sweet jargon of the man William, of

"Violets blue,
But sweeter than the lids of Juno's eyes."

Words which have very little real meaning, but a kind of enchantment of suggestion, like a snatch of an old song.

Either side of you the shrub-oaks are putting out their first young leaves, and you stop momentarily to admire. They are as exquisite as an infant's hand, so clearly cut and finished in their red velvet richness. There is many a city lady, perhaps, who has never seen a new oak leaf, and would think, if she did, that a French milliner had shaped it of crimson velvet. Here now is another oak, whose infant leaves of a different form and texture are of a delicate pink shade, and thin as tissue paper; from a third the tasseled blossom is hanging swaying in the wind. You take these little new-made leaves, and lay them in your hand with tender reverence; there is an exquisiteness in them, a perfection that impresses you with the unvarying power and skill that acts from year to year, and every spring re-enacts the resurrection miracle of the former. God giveth it a body as it pleaseth him, and to every leaf its own body. Of all the multitude of things which at spring time reclothe themselves, not one makes a mistake, or comes out accidentally in the garments of his neighbour.

We ramble on, and now the ground sinks and becomes black and marshy. Here the white violets love to unfold—fair they are, streaked with purple on their under lip, and sending out a fragrance not unlike their English namesake. Here, too, rejoicing in the black, rich mould, rises the green, luxuriant *Veratrum* with its richly plaited leaf, and the plant of less fragrant odour, whose name is not for ears polite, but which certainly grows with a jubilant rank hilarity, and shows a stocky greenness by no means unworthy admiration. Vigour and vivacity are admirable even in a *skunk's cabbage*, and one had rather, after all, look at its rank, hearty coarseness, than at a sickly, conservatory nursling, as one prefers the honest, rude, genuine nature, to an insipid conventionalist.

But, lo! the *silverweed*, with its tufts of graceful leaves; a child also of moist places, and rejoicing in shade. Silverweed was one of the fairy queens of our childhood, for it was our delight to hold a spray beneath the brown rippling

waters of the brook, and see it change to glittering silver, an easy jugglery, at which children never tire of wondering. Silverweed has no blossom now, but in August will shake her head adorned with tremulous white fringes fit for a fairy court. But there, if our eyes do not deceive us, is a clump of pink *lady-slippers* hiding in yonder knot of alders! Some call them Venus' moccasin, and with their broad folded leaves, their gracefully-bent head, their pink, shell-like blossoms, they are worthy any court of flowers. Yonder old mossy stump has a white crowd of the *crows-foot* around it, standing with bowed heads amid their maroon-colored-leaves. The flower never seems in good spirits, it is rarely open, but stands downcast, with its corolla folded together, and the faintest streak of rose-colour on its petals; it is a thoughtful and pensive flower, and we have often wondered whether it be identical with the "tufted crow-toe" which Milton summons to deck the bier of Lycidas:

"Call the vales, and bid them hither bring
Their bells and flowerets of a thousand hues.
Ye valleys low, where the mild whispers use
Of shades, and wanton winds, and gushing brooks,
On whose fresh lap the swart star rarely looks,
Bring hither all your quaint, enamelled eyes
That on the green turf suck the honied showers,
And purple all the ground with vernal flowers.
Bring the rath primrose, that forsaken dies,
The tufted crow-toe, and pale jessamine,
The white pink, and the pansy freaked with jet,
The glowing violet, the musk rose,
And the well-attired woodbine."

Close beside the crows-foot grows the fairest of spring's children, the *ethereal anemone*. The wind flower—flower that seems to float on the breeze, to be a blossom of air more than earth. To us it seems like those tremulous shimmering delights, half told, yet inexpressible, that are born in our hearts every spring time, and which seem airy more than earthly. But hark! a still small gurgle among those heavy green leaves, and lo! the little brown brook, with a still tingle, is winding its way among the dense undergrowth. Not prattling, whirling, frisky, like some of his tribe, but discreet and still; he comes stealing with scarce a murmur, sliding through yonder gap in the old mossy stone wall, playing in a thousand quaint little rings and eddies, bearing along on his waters the white showering leaves of the shadblow and the anemone. Listen! and there is the faintest tinkle! You can hear every whirr of the leaves; you seem to hear a patter and a flutter, and yet the sound is so small, it is what the Germans call an *unthing*. Ah, how beautiful it is to be so deeply alone, and what a sacredness there is in the still small voices of leaves! If there is devotion in the hush of a congregation, in the flutter of the great Bible leaves, in the hymn-book's rustle before the psalm in church, there is a deeper devotion in these inner shrines of nature, where the voice of the Lord God is heard walking among the trees of the garden. Though living in a theological neighbourhood, we cannot but think with Wordsworth:

"One impulse from a vernal wood,
May teach you more of man,
Of moral evil and of good,
Than all the sages can."

—H. B. S.

THE VINTAGE AND THE VINTAGERS.

LET us now proceed to the joyous ingathering of the fruits of the earth—the great yearly festival and jubilee of the property and the labour of Medoc. October, the "wine month," is approaching. For weeks, every cloud in the sky has been watched—every cold night breeze felt with nervous apprehension. Upon the last bright weeks in summer, the savour and the bouquet of the wine depend. Warmed by the blaze of an unclouded sun, fanned by the mild breezes of the west, and moistened by morning and evening dew, the grapes by slow degrees attain their perfect ripeness and their culminating point of flavour. Then the vintage implements begin to be sought out, cleaned, repaired, and scoured and sweetened with hot brandy. Coopers work as if their lives depended upon their industry; and all the anomalous tribe of lookers-out for chance jobs in town and country pack

up their bag and baggage, and from scores of miles around pour in ragged regiments into Medoc.

There have long existed pleasing, and in some sort poetical, associations connected with the task of securing for human use the fruits of the earth; and to no species of crop do these picturesque associations apply with greater force than to the ingathering of the ancient harvest of the vine. From time immemorial, the season has typified epochs of plenty and mirthful-heartedness—of good fare and of good will. The ancient types and figures descriptive of the vintage are still literally true. The march of agricultural improvement seems never to have set foot amid the vines. As it was with the patriarchs of the East, so it is with the modern children of men. The goaded ox still bears home the high-pressed grape-tub, and the feet of the treader are still red in the purple juice which maketh glad the heart of man. The scene is at once full of beauty, and of tender, and even sacred associations. The songs of the vintagers, frequently chorussed from one part of the field to the other, ring blithely into the bright summer air, pealing out above the rough jokes and hearty peals of laughter shouted hither and thither. All the green jungle is alive with the moving figures of men and women, stooping among the vines, or bearing pails and basketfuls of grapes out to the grass-grown cross-roads, along which the labouring oxen drag the rough vintage carts, groaning and cracking as they stagger along beneath their weight of purple tubs heaped high with the tumbling masses of luscious fruit. The congregation of every age and both sexes, and the careless variety of costume, add additional features of picturesqueness to the scene. The white-haired old man labours with shaking hands to fill the basket which his black-eyed imp of a grandchild carries rejoicingly away. Quaint broad-brimmed straw and felt hats—handkerchiefs twisted like turbans over straggling elf locks—swarthy skins tanned to an olive-brown—black flashing eyes—and hands and feet stained in the abounding juices of the precious fruit—all these southern peculiarities of costume and appearance supply the vintage with its pleasant characteristics. The clatter of tongues is incessant. A fire of jokes and jeers, of saucy questions, and more saucy retorts—of what, in fact, in the humble and unpoetic but expressive vernacular, is called “chaff,”—is kept up with a vigour which seldom flags, except now and then, when the butt-end of a song, or the twanging close of a chorus, strikes the general fancy, and procures for the *morceau* a lusty *encore*. Meantime, the master wine-grower moves observingly from rank to rank. No neglected bunch of fruit escapes his watchful eye. No careless vintager shakes the precious berries rudely upon the soil, but he is promptly reminded of his slovenly work. Sometimes the tubs attract the careful superintendent. He turns up the clusters to ascertain that no leaves nor useless length of tendril are entombed in the juicy masses, and anon directs his steps to the pressing-trough, anxious to find that the lusty treaders are persevering manfully in their long-continued dance.

Thither we will follow. The wine-press, or *cuvier de pressoir*, consists, in the majority of cases, of a massive shallow tub, varying in size from four square feet to as many square yards. It is placed either upon wooden trestles or on a regularly-built platform of mason-work, under the huge rafters of a substantial outhouse. Close to it stands a range of great butts, their number more or less, according to the size of the vineyard. The grapes are flung by tub and caskfuls into the *cuvier*. The treaders stamp diligently amid the masses, and the expressed juice pours plentifully out of a hole level with the bottom of the trough, into a sieve of iron or wicker-work, which stops the passage of the skins, and from thence drains into tubs below. Suppose, at the moment of our arrival, the *cuvier* for a brief space empty. The treaders—big, perspiring men, in shirts and tucked-up trousers—spattered to the eyes with splashes of purple juice, lean upon their wooden spades, and wipe their foreheads. But their respite is short. The creak of another cart-load of tubs is heard, and immediately the waggon is backed up to the broad open window, or rather hole in the wall, above the trough. A minute suffices to wrench out tub after tub, and to tilt their already half-mashed clusters splash into the reeking *pressoir*. Then to work again. Jumping with a sort of spiteful eager-

ness into the mountain of yielding quivering fruit, the treaders sink almost to the knees, stamping, and jumping, and rioting in the masses of grapes, as fountains of juice spurt about their feet, and rush bubbling and gurgling away. Presently, having, as it were, drawn the first sweet blood of the new cargo, the eager trampling subsides into a sort of quiet, measured dance, which the treaders continue, while, with their wooden spades, they turn the pulpy remnants of the fruit hither and thither, so as to expose the half-squeezed berries in every possible way to the muscular action of the incessantly moving feet. All this time the juice is flowing in a continuous stream into the tubs beneath. When the jet begins to slacken, the heap is well tumbled with the wooden spades, and, as though a new force had been applied, the juice-jet immediately breaks out afresh. It takes, perhaps, half or three-quarters of an hour thoroughly to squeeze the contents of a good-sized *cuvier*, sufficiently manned. When at length, however, no further exertion appears to be attended with corresponding results, the tubfuls of expressed juice are carried by means of ladders to the edges of the vats, and their contents tilted in; while the men in the trough, setting-to with their spades, fling the masses of dripping grape-skins in along with the juice. The vats sufficiently full, the fermentation is allowed to commence. In the great cellars in which the juice is stored, the listener at the door—he cannot brave the carbonic acid gas to enter further—may hear, solemnly echoing in the cool shade of the great darkened hall, the bubblings and seethings of the working liquid—the inarticulate accents and indistinct rumblings which proclaim that a great metempsychosis is taking place—that a natural substance is rising higher in the eternal scale of things, and that the contents of these great giants of vats are becoming changed from floods of mere mawkish, sweetish fluid, to noble wine—to a liquid honoured and esteemed in all ages—to a medicine exercising a strange and potent effect upon body and soul—great for good and evil. Is there not something fanciful and poetic in the notion of this change taking place mysteriously in the darkness, when all the doors are locked and barred—for the atmosphere about the vats is death—as if Nature would suffer no idle prying into her mystic operations, and as if the grand transmutation and projection from juice to wine had in it something of a secret and solemn and awful nature—fenced round, as it were, and protected from vulgar curiosity by the invisible halo of stiding gas? I saw the vats in the Chateau Margaux cellars the day after the grape-juice had been flung in. Fermentation had not as yet properly commenced, so access to the place was possible; still, however, there was a strong vinous smell loading the atmosphere, sharp and subtle in its influence on the nostrils; while, putting my ear, on the recommendation of my conductor, to the vats, I heard, deep down, perhaps eight feet down in the juice, a seething, gushing sound, as if currents and eddies were beginning to flow, in obedience to the influence of the working Spirit, and now and then a hiss and a low bubbling throb, as though of a pot about to boil. Within twenty-four hours the cellar would be unapproachable.—(*Claret and Olives.*)

(To be continued.)

LONDON MARKETS.—JULY 16TH.

As last week the market was gay with the fruit from the Royal Botanic Show, so this week that from Chiswick has found its way there also, where it will be better seen, and attract greater crowds than it did at Chiswick last Wednesday, when, according to the *Times*, the weather was so bad, and “the company” so small, that not even a waiter dared show his nose in the refreshment-booth. *Pines* are very plentiful, as also *Grapes*, *Peaches*, and *Nectarines*. The supply of *Strawberries* is also very great, and the fruit, generally speaking, very good indeed. *West India Pines* are come in, of good quality, and make from 2s. to 3s. 6d. each. The finest *Black Circassian Cherries* fetch 6s. per lb. *Apricots*, from France, are plentiful, at 1s. 6d. to 2s. 6d. per doz. Flowers of all kinds, and Vegetables also, are in abundance.

COVENT GARDEN.

FRUIT.	
Apples, kitchen,	
per bushel	7s. to 12s.
„ dessert, doz.	6d. „ 2s.
Pears	— „ —
Apricots, per doz.	2s. „ 2s. 6d.
Peaches, per doz.	10s. „ 15s.
Nectarines, doz.	10s. „ 15s.
Cherries, lb.	4d. „ 2s.
Plums	— „ —
Pine-apples, lb.	5s. „ 8s.
Grapes, lb.	4s. „ 8s.
Melons, each	3s. „ 8s.
Figs	— „ —
Gooseberries, per	
half sieve 1s. 6d.	„ 2s. 6d.
Currents	— „ —
Raspberries	— „ —
Strawberries, per	
pottle	4d. „ 9d.
Oranges, per 100	4s. „ 10s.
Lemons, doz.	1s. to 1s. 6d.
Almonds, per lb.	2s. „ —
Nuts, Filberts, lb.	— „ —
„ Cobs, lb.	— „ —
„ Barcelona,	
per bushel	20s. „ 22s.
„ Brazil, per	
bushel	12s. „ 14s.
Chestnuts	— „ —

VEGETABLES.	
Cabbages, per doz.	9d. to 1s.
„ Red, per doz.	2s. „ 4s.
Cauliflowers, doz.	1s. „ 2s. 6d.
Brocoli	— „ —
Savoy	— „ —
Greens	— „ —
Spinach, per sieve	1s. „ 2s.
Peas, per sieve	1s. 6d. „ 2s.
Beans	— „ —
French Beans, per	
100	— „ 6d.

POTATOES.

Regent's, York,	
per ton	160s. to 195s.
„ Kent and	
Essex	140s. „ 180s.
„ Lincoln	120s. „ 180s.

Scarlet Runners	— „ —
Carrots, bunch ..	4d. „ 8d.
Parsnips	— „ —
Beet, per doz.	6d. „ 1s. 6d.
Potatoes, new, lb.	1d. „ 2d.
Turnips, bunch ..	2d. „ 4d.
Onions, young,	
bunch	1d. „ 2d.
Leeks, per bunch	2d. „ 6d.
Garlic, per lb.	6d. „ 8d.
Shallots, per lb.	4d. „ 6d.
Horseradish, per	
bundle ..	1s. 6d. to 2s. 6d.
Lettuce, Cos, per	
score	6d. „ 1s.
„ Cabbage	6d. „ 8d.
Endive, per score	1s. „ 1s. 6d.
Celery, per bun.	8d. „ 1s.
Radishes, per doz.	
bunches	4d. „ 6d.
Water Cresses, per	
doz. bunches ..	6d. „ 9d.
Small Salad, per	
punnet	2d. „ 3d.
Asparagus, per	
bundle	1s. 6d. „ 4s.
Sea-kale, per pun.	6d. „ 1s.
Rhubarb, per bdle.	2d. „ 6d.
Cucumbers, each	3d. „ 1s.
Vegetable Marrow	— „ —
Tomatoes	— „ —
Mushrooms, per	
pottle	8d. „ 1s.

HERBS.	
Basil, per bunch	6d. to 9d.
Marjoram, per	
bunch	6d. „ 9d.
Fennel, per bunch	2d. „ 3d.
Savory, per bunch	2d. to 3d.
Thyme, per bunch	2d. „ 3d.
Parsley, per bunch	2d. „ 3d.
Mint, per bunch	4d. „ 6d.

GRAIN AND SEED.

WHEAT.	
Kent and Essex,	
red, per qr.	72s. to 79s.
Ditto, white	75s. „ 85s.
Norfolk and Suff-	
folk	70s. „ 78s.
Dantzic	80s. „ 88s.
Rostock	78s. „ 89s.
Odessa	70s. „ 75s.
American	80s. „ 85s.
BARLEY.	
Malting	36s. to 37s.
Grinding and	
Distilling	31s. „ 33s.
Chevalier	34s. „ 36s.
OATS.	
Scotch, feed ..	31s. to 35s.
English	27s. „ 31s.
Irish	26s. „ 29s.
Dutch Broo ..	30s. „ 31s.
Danish	28s. „ 30s.
Russian	29s. „ 31s.
BEANS.	
Harrow	41s. to 43s.
Pigeon	42s. „ 47s.
Tick	40s. „ 43s.

PEAS.	
Boiling, per qr.	38s. to 44s.
Common	37s. „ 38s.
Grey	34s. „ 38s.
Maple	38s. „ 40s.
SEEDS.	
Turnip, White, per	
bush	— to —
Swede	— „ —
Rape	82s. „ 84s.
Linseed, sowing	— „ —
„ crushing	69s. „ 72s.
Clover, English,	
red	— „ —
„ Foreign do.	— „ —
„ White	— „ —
Trefoil	— „ —
Rye	40s. „ 43s.
Tares	— „ —
Canary	46s. „ 50s.
Hemp	48s. „ 56s.
Linseed Cake, per	
ton	£11 to £12
Rape Cake	£6 10s. „ £6 15s.
Indian Corn ..	47s. „ 50s.

HOPS.

Mid & E. Kent	£14 to £18	Weald of Kent
		£10 10s. to £11 10s.
Sussex	£10 to £10 10s.	

HAY AND STRAW.

Clover, 1st cut per		Meadow Hay, new	80s. to 95s.
load	100s. to 147s.	Rowan	— „ —
Ditto, 2nd cut	90s. „ 130s.	Straw, flail	30s. „ 36s.
Meadow Hay ..	90s. „ 126s.	Ditto, machine	28s. „ 32s.

MEAT.

Beef, inferior, per		Mutton, mid.	3s. 6d. to 4s.
8 lbs.	2s. 10d. to 3s. 2d.	Do. prime ..	4s. 2d. to 4s. 4d.
Do. mid.	3s. 4d. to 3s. 6d.	Veal	3s. 2d. to 4s. 4d.
Do. prime	3s. 8d. to 3s. 10d.	Lamb	4s. 4d. to 5s. 4d.
Mutton, in-		Pork, large	3s. 4d. to 3s. 8d.
ferior	3s. to 3s. 6d.	Ditto, small	3s. 10d. to 4s. 4d.

POULTRY.

Goslings	5s. to 6s. 6d.	Ducklings	2s. 3d. to 3s. 3d.
Fowls	2s. „ 3s.	Pigeons ..	0s. 6d. „ 0s. 8d.
Capons ..	3s. 6d. „ 4s. 6d.	Rabbits ..	1s. 0d. „ 1s. 6d.
Chicken ..	1s. 9d. „ 2s. 3d.		

PROVISIONS.

BUTTER.—Cwt.		CHEESE.—Cwt.	
Dorset, fine ..	98s. to 102s.	Cheshire, fine ..	70s. to 80s.
Do. middling ..	80s. „ 86s.	Gloucestershire,	
Fresh, per doz.		double	68s. „ 74s.
lbs.	8s. „ 12s.	Ditto, single	56s. „ 70s.
Friesland	88s. „ 92s.	Somerset	68s. „ 80s.
Kiel	90s. „ 94s.	Wilts, loaf	63s. „ 74s.
Carlow	94s. „ 100s.	Ditto, double ..	60s. „ 68s.
Waterford	88s. „ 94s.	Ditto, thin	54s. „ 64s.
Cork	84s. „ 98s.	Ditto, pines	72s. „ —
Limerick	86s. „ 98s.	Berkeley, thin ..	62s. „ 66s.
Sligo	— „ —		

BACON.—Cwt.		HAMS.—Cwt.	
Wiltshire, dried	78s. to 80s.	York, new	78s. to 90s.
Waterford	70s. „ 74s.	Westmoreland ..	76s. „ 86s.
		Irish	70s. „ 80s.

WOOL.

Down Tegs 1s. ½d. to 1s. 1½d.		Kent Fleeces 1s. ½d. „ 1s. 1½d.
Ditto Tegs and		Leicester,
Ewes .. 1s. 0½d. „ 1s. 2d.		fleeces .. 1s. 0½d. „ 1s. 1d.
Half-bred Hog-		Long, heavy do. 11d. „ 1s.
gets .. 1s. 0½d. „ 1s. 1½d.		Combing skins 11½d. „ 1s. 1d.
Do. Wethers .. 1s. 0½d. „		Flannel wool 1s. 1d. „ 1s. 2½d.
1s. 1d.		Blanket wool 8½d. „ 1s. 0½d.

TO CORRESPONDENTS.

HARDY HEATHS (*Ericaceæ*).—There is no doubt but the culture of hardy Heaths would repay you, by their beauty and interest, the trouble you would incur in growing them. Mr. Appleby is writing on their culture, and will give you, by-and-by, his ideas on form, colour, and grouping. Your inquiry about any work containing a list of the best is not so easy to answer. You will find a select list in *THE COTTAGE GARDENERS' DICTIONARY*, and a longer one in Loudon's "Hortus Britannicus;" but if you wait for a week or two, Mr. Appleby will give a list describing the height and colour of each variety. See what he says in this number.

GREEN CENTRE IN ROSES (*H. W.*).—Certain Roses on some soils will produce the leaves, or sepals, in the middle of the flower, which gardeners call "green centre." We have never been able to discover the cause; and the best resource is to buy some other variety.

CALCEOLARIAS (*R. Shipley*).—They are very good as to their colour and marking; but the blooms were too shrivelled for us to form a judgment as to their form.

NAMES OF PLANTS (*S. R. Short, jun.*).—1. *Veronica spicata variegata*. 2. Looks like a species of *Monarda*; send us this when in flower. 3. *Claytonia perfoliata*. 4. *Phlox stolonifera*, var. *crassifolia*. 5. *Asperula odorata*. 6. *Crucianella stilosa*. 7. *Cynanchum acutum*.

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WEEKLY CALENDAR.

D M	D W	JULY 24—30, 1855.	WEATHER NEAR LONDON IN 1853.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in Inches.						
24	Tu	Wall Butterfly.	30.103—30.051	85—57	S.E.	—	13 a 4	59 a 7	11 45	10	6 11	205
25	W	St. JAMES. Ds. CAMB. B. 1797.	30.054—30.040	89—58	E.	—	15	58	morn.	11	6 12	206
26	Th	Black Hair-streak Butterfly.	30.103—30.052	75—55	E.	52	16	57	0 18	12	6 13	207
27	F	Purple Hair-streak Butterfly.	30.152—30.073	67—51	S.E.	03	17	55	1 7	13	6 13	208
28	S	Green Hair-streak Butterfly.	30.200—30.182	71—38	S.E.	—	19	54	2 17	14	6 12	209
29	SUN	8 SUNDAY AFTER TRINITY.	30.183—30.045	76—54	S.	—	20	52	rises.	☺	6 11	210
30	M	Large Blue Butterfly.	29.969—29.816	82—56	S.	46	22	51	9 a 10	16	6 9	211

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 74.1°, and 52°, respectively. The greatest heat, 92°, occurred on the 25th, in 1844; and the lowest cold, 40°, on the 24th, in 1838. During the period 113 days were fine, and on 83 rain fell.

THE FRUITS AND FRUIT TREES OF GREAT BRITAIN.

NO. I.

FORELLE, OR TROUT PEAR.

IDENTIFICATION.—Diel Kernobst. v. 51. Christ Handw. 147. Down. Fr. Amer. 389. Hort. Soc. Cat. ed. 3, n. 235.
SYNONYMES.—Forellenbirne *Diel Kernobst.* v. 51. Poire Truitee. *Album de Pom.* iii. 65. Forelle. *Ibid.* Corille at Courtray. Truite.
FIGURES.—Sickler Obstgärt. xx. t. 16. Hort. Trans. v. p. 409. *Album de Pom.* iii. pl. 18.

THE varieties of our autumn Pears are already too numerous, and we would not willingly increase them any farther, unless when we meet with something which deserves especial notice. The variety which we are about to describe, though not new, is one which is very



little known in this country. We have had it sent us on one or two occasions by some of our readers, who

have wished us to name it for them; but it is far from being common, although it may be had in most of the respectable nurseries.

The fruit is of medium size, and generally oblong-ovovate, but sometimes assuming a pyriform shape; but that which is shown in the figure is the more characteristic. When first gathered the skin is smooth, of a fine bright grass-green on the shaded side, and of a glossy brownish-red on the side exposed to the sun; but as it ripens by keeping, the green becomes a very beautiful lemon-yellow, and the red a brilliant crimson, thinly and not intensely coloured. It is thickly dotted all over with yellowish-grey dots, which are frequently encircled with a crimson ring, giving it a speckled appearance, like a trout, and hence the name. The eye is small, with short, hard segments, like the head of a clove, and set in a shallow basin. The stalk is from an inch to an inch-and-a-quarter long, slender, and inserted in a small, shallow cavity. The flesh is nearly pure white, fine-grained, very juicy, buttery, and melting, with a rich, vinous, and aromatic flavour.

This very valuable dessert Pear is ripe in November, and continues in use till January. It is one of the most beautiful varieties in cultivation; and, unlike many of those which have only size and colour to recommend them, it forms not only an ornamental but a useful object in the dessert.

The tree attains, when at its full growth, the middle size, and is vigorous during the early part of its growth. It is also an early and a good bearer, very healthy, and succeeds better on the Pear stock than on the Quince. It bears well in the open ground, and should be grown as a dwarf or pyramid, rather than a standard, as the fruit is very apt to be thrown down by violent winds. In northern and exposed situations it should receive the shelter of a wall; but in the midlands and the south it does well in the open ground.

The Forelle, or Trout Pear, is a native of Northern Saxony, and was introduced to this country between thirty and forty years ago.

It will be understood by our readers, that the above is from the pen of one of our Editors, the author of "British Pomology;" nor could we place before our readers a more useful series of illustrations and of fruit-history, than will be afforded by these notes and portraits of the "Fruit of Great Britain." Every one fond

of orcharding must at some time have wished for a guide whereby he might ascertain the name, and history, and works where described and portraited, of some variety in his collection. The series of notes and outlines which we have now commenced will be such a guide.

Whenever a species of fruit is for the first time mentioned in this series, we purpose accompanying it by its history; and we now gather together, with a few additions, what we have previously published relative to THE PEAR.

The Hebrews knew it only in its wild state (*Agas*), but Homer places it among the fruits of the garden of Alcinous:—

“The branch here bends beneath the weighty pear,
And verdant olives flourish round the year.
The balmy spirit of the western gale,
Eternal breathes on fruits untaught to fail:
Each dropping pear a following pear supplies,
On apples, apples, figs on figs arise:
The same mild season gives the blooms to blow,
The buds to harden, and the fruits to grow.”

Beyond the fact of the ancient Greeks having this fruit in cultivation, we know nothing; but when we descend a little lower in the order of time, we find among the early Romans not only considerable knowledge of its cultivation, but that they had many varieties, distinguished by names which told of their quality, their place of birth, or their first owners. Thus Cato, who lived half a century before the birth of our Saviour, enumerates, as the most excellent of Pears, the Voleman, Anicianan, and Sementivan; at the same time characterising the time when winter had quite departed, as being “when the Pear begins to blossom.”

Cato also gives directions for raising the Pear from seed, and giving them a shelter, which might be adopted even here advantageously. He says: “Sow it very early in the spring. Make the beds five feet wide; lay in some pulverized manure; spread it, and break the clods; make the bed level, or rather a little hollow; then sow the seed thick, like flax, sift the earth over it an inch thick; level the earth with a tablet or with your feet; fix poles around, lay perches on them, and lay on sprays or hurdles made of the fig-tree, which may keep off the cold and the heat. Make them so that a man may be able to walk under them. Weed the beds often; as soon as the beds begin to grow, take them up; for, if you pluck up hardy weeds, you will take up the pears with them.”

Columella, Pliny, and others, are still more copious in their lists of Pears; and some modern fruitists have endeavoured to identify these with varieties at present known to orchardists. Without expressing any assent to these identifications, yet we think they are not without interest; and we would not have the man for our friend who does not care to know that he is partaking of fruit descended from trees of which Pliny, Cicero, Varro, Columella, and Virgil, may have enjoyed the produce.

To aid our readers in the enjoyment of this pleasant possibility, we will trace out some particulars which Dalecamp and others have suggested upon this subject.

Columella says: “We must be careful to plant our

orchards with the most excellent and fruitful Pears. They are these:” *Crustumina*. This was so called from Crustuminum, in Hetruria, where it was most cultivated. Pliny says it was of most grateful flavour; and Servius says it was small and partly red. Supposed to be our *Petit Blanquet*, or Little Blanket.

Regia, or Royal. Pliny says its stalk was so short that it grew close to the branch, was oblong in form and green in colour. Dalecamp considers it to be the *Carmaignole*.

Signina. So named from Signia, in Italy. Pliny says it was by some, from its appearance, called *Testacea*, or Brick-coloured, Dalecamp thinks it is the Cat Pear (*Poire Chat*).

Superba. It is small, says Pliny, but it is the earliest Hardouin and Dalecamp agree that it is our *Little Muscat*.

Ordeacea, or Barley Pear; because, says Pliny, it was ripe in barley harvest. It is thought to be our St. John's Pear, or *Amiré Joannet*.

Favoniana. Pliny says it was red, and a little larger than the *Superba*. Dalecamp and Hardouin think it is our *Great Muscat*.

Lateritana. Probably from its brick-red colour; is supposed to be the *Poire Prévost*, or Provost Pear.

Dolabelliana, was named after a Roman citizen, and distinguished for its excessively long stalk. Dalecamp thinks it is our *Musette d'automne* (Autumn Musette), or *Pastorale*.

Venerca, or Venus Pear. So called, says Pliny, from the beauty of its colours. Dalecamp says it is the *Poire Acciole*.

Onychina, the Onyx Pear, from its purple tints. Dalecamp thinks it is the *Cuisse Madame*.

We might extend this catalogue twofold, but, after remarking that though the Romans paid such attention to the Pear, it is entirely neglected by the degenerate race now occupying the territory of the Seven Hills, we will next pass on to the consideration of what has been done to improve this fruit in more modern times.

To show, further, the knowledge of Pear-culture possessed by the Romans, we shall not stop to gather together the fragments of information sustaining our opinion, which we find scattered through the works of Cato, Columella, and Varro, but will turn at once to what is said by the brothers Gordian and Maximus Quintilius. They flourished in the second century, and in fragments of their writings, in the “*Libri xx. Geoponicorum*,” we find that they recommend for the Pear a cool and damp soil, adding, that if the fruit is gritty, the soil should be improved, and well watered—a recommendation also given by Palladius. Diophanes, who wrote before Columella, Varro, and Pliny, for they quote from his writings, directs that Pears must be planted in a mild situation; that to promote fruitfulness, some of the main roots should be split, and the fissure kept open by a wooden wedge; and that if languid, they should be manured with the refuse of the wine-press. The Romans had *their* Mr. Rivers, or advocate for dwarf Pears, for Tarentinus directs them to be grafted on

the Quince (*Malum cydonia*). We might enlarge our extracts demonstrating that they knew how to propagate the Pear by cuttings, a lost art, but recently said to be re-discovered; however, we have quoted enough to justify our statement, and will at once proceed to examine what our earliest English herbal-writer, Dr. Turner, says about this fruit-tree.

In the second part of his "Complete Herbal," published in 1562, he remarks, "We have many kinds of garden Pears with us in England, and some kinds better than ever I saw in Germany for wholesomeness; and some in Germany more pleasant and greater than ever I saw in England. I have read in no old writer so many kinds of Pears as I read of in Pliny, whereof I will show certain Latin names, and compare them with our English Pears and Dutch Pears as well as I can. *Pyrus superba*, that is to say, Proud Pears, are little, and soonest ripe; and these are called in Cambridge, Midsummer Pears. *Falerna pyra* have their name, saith Pliny, because they be full of juice. These are called, in some places, Watery Pears, or Moist Pears. *Dolobelliana* are the Pears that have long footstalks. I remember not how they be named in England. *Volema*, whereof Virgil makes mention in the second book of his Georgicks. These, because they are very heavy, as Virgil sheweth, and very great, as their name betokeneth, for they seem to have their name of *vola*, that is, the hollow place or loof of a man's hand, because they be as big as a man can grip in the palm or loof of his hand. These are commonly called in English, Wardens, if they have a binding and be red when they are roasted, and indure unto March or February. It appeareth that they have their name of long keeping; for Warden, in Dutch, from whence our English came, is to keep. *Serotina pyra* are they that hang upon their mother until winter, and were ripe with the frost. These are partly our Wardens, and partly other long-during Pears, which are called in Dutch, Winter Birnen; and they may be well called in English, Winter Pears."

Next in order of time came Gerarde, who says—"The stock, or kindred of Pears are not to be numbered; every country hath its peculiar fruit. Myself knows one curious in grafting and planting of fruits, who hath in one piece of ground at the point of three-score sundry sorts of Pears, and those exceeding good, not doubting but if his mind had been to seek after multitudes he might have gotten together the like number of those of worse kinds." Johnson has altered Gerarde's arrangement of the Pears he specified, and given the following as the ancient titles, and our Pears which are synonymous. Whether correct or not in that respect, they certainly shew eight varieties then known in our gardens, and some of which are still surviving. 1, *Pyrus superba*, Katherine Pear; 2, *Pyrus præcocia*, Jenneting Pear; 3, *Pyrus Jacobæa*, St. James's Pear; 4, *Pyrus regale*, Pear Royal; 5, *Pyrus Palatinum*, Bergamot Pear; 6, *Pyrus Sydonia*, Quince Pear; 7, *Pyrus episcopata*, Bishop's Pear; 8, *Pyrus hyemale*, Winter Pear. "All these," says Gerarde, "and many more, and those most rare and good, are growing in the grounds of Master

Richard Pointer, a most cunning and curious graffer and planter of all manner of rare fruits, dwelling in a small village near London, called Twicknam; and also in the ground of an excellent graffer, and painful planter, Mr. Henry Banbury, of Touthill Street, near Westminster; and likewise in the ground of a diligent and most affectionate lover of plants, Mr. Warner, near Horsey-down, by London." It would not avail much now to seek for Pear Trees, either in Tothill-street or Horsleydown!

Descending a few years later, we find, in some degree from our increased intercourse with France, but still more from the improvement in our garden literature, that we have much fuller and certain information relative to the varieties then known. Many of them are among our most common Pears now cultivated. Thus Parkinson, in his *Paradisi in sole Paradisus terrestris*, published in 1629, mentions among others the Bon Chretien, Bergamot, Green Chesill, Catherine, Windsor, and "the Peare of Jerusalem, which being baked, is as red as the Red Warden, whereof Master William Ward, of Essex, hath assured me, who is the chief keeper of the King's Granary at Whitehall."

Parkinson was certainly not a total abstinent from chirpy liquor, for he says, "The Perry made of Choke Peares, notwithstanding the harshnesse, and evill taste, both of the fruit when it is greene, and also of the juyce when it is new made, doth yet after a few moneths become as milde and pleasant as wine, and will hardly bee knowne by the sight or taste from it: this hath beene found true by often experience, and, therefore, wee may admire the goodnesse of God, that hath given such facility to so wilde fruits, altogether thought uselesse, to become usefull, and apply the benefit thereof both to the comfort of our soules and bodies."

EXHIBITION OF THE HORTICULTURAL SOCIETY.—JULY 11.

THIS was the second time, during an exhibition life of twenty years, on which I had seen gardeners *flooded-out*. We have all of us seen gardeners "frozen out," times out of number, but it has fallen to the lot of few to see them, or the very best of their number, fairly overwhelmed by a deluge. Once, at the Regent's Park, three or four years since, and again, on the 11th instant, I witnessed such a state of things, under similar circumstances,—floods of rain all day, as enables me to solve the question about the kind of "spring" which moves the great bulk of our garden, or horticultural exhibitors. It is neither medals, nor money, nor rivalry, which can move the spirit of the exhibitor, for there were enough of the three elements, on both occasions, to satisfy all conscience; but the "spirit" was dead within them, and they went about as if nothing in this world was worth living for but the applause of the multitude; this they could not hope for on such occasions, for the multitude dare not venture out-of-doors when it "pours in torrents." But amongst all classes there are some few to be found whose minds and manners are not much affected by good or bad luck; they are always the same, as we say, and we all like to meet them in their own element, be it garden or field, hill or dale, afloat or ashore. We had our share of them at the last July Show in the "Chiswick Gardens," which Show, accord-

ing to the programme, was to be a grand fruit exhibition at the expense of plant culture; but if we reflect on two things, this was an unwise move on the part of the Society, which would have told very much against their Show, if the "multitude" could find their way there. The first of the two things is the fact, that for every one who grows his own Cabbages, and his own Grapes and Pine Apples, in this country, there are ninety-five who cannot do so—not for want of money, but for want of room; but every one endeavours to grow his own, or her own plants; buys all the best books to learn from; goes to all the Shows, to see "with his or her own eyes," how things are done; and all the fruit in England would not compensate him or her for the loss of a "new bedding-plant," or a "new" something to him or to her in the plant way, although it might be an old story to all but "their own selves." And the second thing is, that Queen Victoria, the Duchess of Sutherland, and his Grace of Norfolk, with not quite double their number from the bulk of the nation, will run off with the best fruit prizes, leaving no chance for the ups and downs of competition, as in other things. It is all very well and proper to have a grand fruit show, if the funds could afford it, in addition to a grand flower show, or such a show of plants as very liberal prizes could produce. Exhibitions, now-a-days, are not so much what is claimed for them,—the encouragement of good gardening,—as to please the public who pay for the prizes, after all. For my part, I wish it were otherwise; that companies or societies could undermine bad habits, bad taste, and bad cultivation, everywhere; but the thing cannot be done without money and plenty of it. There are very few people in the world, however, who will give their money merely to encourage a change of their own taste. A taste for gaudy flowers and gaudy flower-beds is, most certainly, the taste of the present age; but your fruit shows, and your mixed border shows, may be a better taste; the difficulty is, how are you to convince people that it is so? Will the people give you admission fees enough for you to prove *their* own bad taste? They will do no such thing; therefore, without an independent fund to carry on the expenses, it is folly to attempt a reform in the public taste; still we should not go back in our cultivation taste by giving prizes to plants that are not worth looking at, as was done at the first Crystal Palace Exhibition.

One of the best points of the Chiswick Shows is, that a badly grown plant is never seen there. Now and then you may see some trumpery new plant, but the Judges take no heed of it for its novelty, and the thing dies away before the end of the week, and that exhibitor never attempts any thing of the kind there again.

We had abundance of fine, handsome plants to admire this day, and a better exhibition of fruit was never seen there, or anywhere else, as far as I know. Queen Victoria was head of them all. British Queens, Prince of Wales, Princess Royal, and almost all the Princes and Princesses Royal were dished up in the shape of some fruit or other, and won the day triumphantly; but there was a desperate struggle for the Derby—the Duke of Norfolk, after riding over the course at the Regent's Park, came in here after Her Majesty, and between Her Majesty and the Duchess of Sutherland. You never saw a cleaner thing done before, than how each of them took the field, and kept it all round to the winning-post; at least, I never did; but Mr. McEwen will find it more easy to beat his Sovereign in good gardening, than teach his Edinburgh critics the value of correct taste in laying out gardens; and both the royal gardener, Mr. Ingram, and the loyal Mr. Fleming, have found a worthy rival, at last, from Arundel Castle.

Mr. Ingram's collection would have made a dessert

thus:—a Queen Pine 4lb, for a top dish; White and Black Grapes, mixed, for the bottom; these were beautiful Hambro's and Royal Muscadine; then for two top corners he had Royal George and Bellegard Peaches; to match those, at the two bottom corners, he had Murray Nectarines and Jefferson Plums; but two Nectarines would have been better, as there was a dish of Victoria Plums without a match, except Strawberries. Elton and Black Eagle Cherries to match, one side of the centre, and nothing to match them on the other side of the centre. Thus tried, we see that "a collection" of fruit does not make the simplest dessert complete.

Mr. McEwen had a Queen Pine for top, and Muscats and Hambro's mixed for bottom; Royal George and Walburton Peaches for two top corners; Murray and Hunt's Tawny Nectarines for the two bottom corners; two kinds of Figs for one side of the centre, and Elton Cherries, with White Gooseberries, for the other side of the centre; the latter pair not a good match; but the dishes were more complete than those in the royal dessert.

Mr. G. A. Watson, of Ealing, tried a collection, but I cannot set it up on the dessert-table without showing that he had too many or too few to balance or match. Is it not very singular, that neither the Society, nor any of these good gardeners, have considered a "collection" of fruit ought, at least, to be such as would "fit" in the dining-room? The smallest collection for a bare dessert-table ought to have either six or ten dishes, top, bottom, and four corner dishes, as the simplest of all; or with a pair of match dishes for each side of the centre, as the next step. Now, if you understand me, how would you "set up" the following for a respectable party? Three Pines, two Melons, one Nectarines, one Muscat Grapes, one Cherries, and two Strawberries; these were Mr. Watson's contributions for the dessert; all very good of their respective kinds, except the Circassian Cherries, which were ripe enough for Covent Garden, but not so for a dessert-table with Pines, Melons, and Grapes. You cannot show your respect for your company so much by a profusion of the good things on the table, as by the taste you show in disposing the dishes. I would sooner eat bread-and-cheese at home, than dine out where the best things were set down before me as if I were a Red Indian, and knew no better than to admire a mixed border of good plants, planted anyhow. Depend upon it, if we do not leave a better legacy for the rising generation than heaps and heaps of the best grown fruit, tumbled together in this fashion, they will not have much reason to be proud of their descent.

Our Oxonian correspondent, "J.," page 242, asks how I would have the dessert in my own dining-room? Certainly not on the dinner-table while the mutton was discussed, except that part of it which came from the still room, "*the best dishes*," and in the height of summer fruit, a portion of the smaller fruit, which is seldom touched. My dessert-table would stand in one corner of the room, but not on the same side of the room as the side-table. My gardener alone would have the management of the dessert-table, and there he would "set up" the fruit before dinner, and all my butler would need to know is, which was the top of the dessert; his own skill would tell where every dish would fit on the large scale of the dining-table. The end of the dessert-table which is nearest to the dining-table ought to be the "top," *invariably*, to save confusion. When the dinner was over, the top dish of the dessert should be the first to move to the top of the dining-table, then the two top corners. Now, if the under-butler knows the routine, he would begin with the bottom dish and two bottom corners, and work up to the centre, where he would meet the butler, and all would be done in less time than

it takes me to write about it. To have the dessert on the dinner-table during the dinner is exactly like cooking a dinner, and then sitting down to eat it, and nothing else. Besides, it looks mean in the extreme, just as if you were at a Highland shooting, and twenty miles from the cellar and larder, and was glad to your heart's content to have the dessert to "fill up," for want of substantialities. I have placed, and helped to place, many a good dinner on a camp-table in a shooting-tent, and from that to the first dining-rooms and first company, up to Prince Albert himself. I was a "man cook," too, and confectioner to boot; and whether I am wrong or right in my fruit and dessert notes, is of less consequence than of being able to impress them deeply on the minds of young housekeepers and young gardeners, for the old ones will have their own way to the end of the chapter.

GRAPES.—The best coloured Black Hambro' Grapes were three large bunches from Mr. Street, gardener to W. Herbert, Esq., Clapham Common. The next best coloured, but larger berries, were from Mr. Fleming, of Trentham, who had also the finest fruit of the Mill Hill Hambro' that ever was exhibited. The berries of this variety were regularly dotted with reddish spots, as if on the inside of the skin; and there was a large basket of very beautiful Black Hambros', from Mr. Harrison, Oatlands Palace; and the best-coloured Muscats were from Mr. Clarke, of Hodderstone; and the next best from Mr. John Strachan, market-gardener, of Beach Hall, near Chester. Mr. Turner, gardener to J. Hill, Esq., of Streatham, showed three excellently-coloured bunches of the true Black Prince,—a good Grape, which is much confused with others in cultivation. Many others had Grapes, black and white, nearly as good as the above; but I must pass them to notice a fine, new White Grape, which was shown by Mr. Busby, gardener to J. Crawley, Esq., of Stockwood Park, Luton. I noticed this fine seedling twice, in the end of 1853, from specimens of it which were shown in Regent Street. I have grown every white Grape worthy of the name, from the *Pitmaston White Cluster* and *Verdello*, the two smallest whites, to the *Nice*, *Trebiana*, and *Salamana*, the three largest of all the white Grapes in cultivation. I reckon the *White Frontignan* as the very best, when well grown, and this new seedling as the next best; but the *White Frontignan* is very difficult to get in prime order, while this is as easy as the *Black Hambro'*, from which it is a seedling, by the pollen of the *Sweetwater*. The taste, the flavour, the flesh, and the juice, seem exactly as intermediate between the two points, and every one of the best fruit-growers agreed with me in my estimation of it, and what every body says must be true.

PINE APPLES were numerous. The heaviest was a *Providence*, 12lb. 3oz., from Mr. Jones, of Dowlais. Mr. Fleming, Mr. Dods, Mr. Davis, and many other well known Pine-growers, came out strongly in this fruit. Mr. Turnbull, gardener to the Duke of Marlborough, had the first prize for a *Cayenne Pine*, weighing 4lb. 12oz.; and for *Queens*, the first prize was given to Mr. Gostling, gardener to Mrs. Deacon,—this was a 4lb. 15oz. fruit, and was considered to be of first-rate flavour.

PEACHES AND NECTARINES were far above the usual run, and very numerous. Mr. Judd, gardener to Earl Spencer, had the first prize for Peaches, but Mr. Turnbull, and Mr. Mitchel, of Brighton, were little behind the best. But passing over the rest of the better-known gardeners, I shall only mention Mr. Hay, gardener to the Bishop of London, and Mr. McQuilter, gardener to Col. Challoner, as having had prizes for Peaches, or Peaches and Nectarines.

MELONS were plentiful as Turnips, and of all sizes and weights; but Mr. Fleming is at the top of this

tree with his own hybrids, which nobody seems to grow so well as himself.

CHERRIES from about Brentford and Ealing carried the day among the market-gardeners, but, to my taste, they gather them too soon. I have seen a few waggon loads of Cherries put in a heap in a large room to ripen them for the Gloucester market, and ever since I have been shy with "ripe Cherries" which I did not gather, or see gathered myself.

STRAWBERRIES.—The best collection of them was from Mr. Lydiard, of Bath; his fruit were very large and well-coloured, and Mr. Smith, of Twickenham, had the largest,—*Sir Charles Napier*. The *White Bickton Pine Strawberry* and the *White Alpine* were very fine; but I missed the very dark one we had last year from Birmingham.

There was only one dish of *Raspberries*, and that from Mr. Lydiard. Mr. Ingram, of the Royal Gardens, sent some fine *Washington Plums*, also *Greengages*, and the *Goliath Plum*. Mr. McEwen sent *Peaches* and *Nectarines*, in pots, ready for table; and Mr. Lane, the great Rose-man, sent a large collection of *Peaches*, *Nectarines*, *Plums*, and *Gooseberries* not ripe, and full-ripe *Cherries*, all in pots, on the Orchard-house plan; and for odds and ends we had *Vanilla*, *Nutmeg*, and *Banana* fruit from Sion House.

ORCHIDS.

Mr. Veitch was the only nurseryman who showed Orchids, but Mr. Wooly, Mr. Carson, Mr. Gidney, Mr. Ivison, and others, showed very good plants in fine bloom, which escaped the heavy pelting rain of that eventful morning. Here, and elsewhere, among the collections of plants, the system of placing them for best effect was visible and unmistakeable, so that the Crystal Palace Show has begun to tell already.

Mr. Veitch began his COLLECTION OF TEN in the centre of the space allotted for him on this wise—a *Sobralia macrantha* for a centre at the back, which was flanked on either side by two large *Aërides* of equal size, *A. odorata*, and *odorata major*, a fine *Dendrobium chrysanthum*, and *Cypripedium barbatum major*, *Saccolabium guttatum*, and *Aërides Lobbii*, well matched; this *Aërides* had twelve branched spikes of bloom, large, rosy flowers, in the way of *affine*, but much finer. *Phalenopsis grandiflora*, and *Aërides affine*, and, as "a bird alone," *Dendrochilum filiforme*; this is the most simple, and, at the same time, the most elegant thing among air plants.

Mr. Wooly, gardener to H. B. Ker, Esq., had the first gold Banksian Medal for his ten. He, too, put his *Sobralia macrantha* in the middle; *Phaius albus* and *Calanthe veratrifolia*, on either side of it; then *Cattleya violacea*, *Sarcopodium Lobbii*, *Lælia cinnabarina*, *Odonoglossum Laurenceanum*, *Epidendrum radiatum*, *Oncidium lanceanum*, and *Aërides odoratum major*.

In the COLLECTION OF SIXES, Mr. Wooly had *Cattleya Harrisonæ*, *Epidendrum rhizophorum*, *Vanda tricolor*, *Saccolabium furcatum* and *guttatum*, and *Aërides affine*.

Mr. Gidney, gardener to Mrs. Ellis, of Hoddesdon, had two fine *Phalenopsis grandiflora*, *Oncidium Lanceanum* and *pulvinatum*, *Epidendrum verrucosum* and *vitellinum*, *Saccolabium furcatum*, *Aërides quinquevulnerum*, *Calanthe masuca*, and *Phaius albus*.

Mr. Carson exhibited in the sixes, *Cypripedium barbatum*, *Miltonia spectabilis*, *Dendrochilum filiforme*, *Cattleya superba*, and *Saccolabium Blumei*.

Mr. Iveson had *Oncidium ampliatum major*, *Aërides odoratum*, *Oncidium luridum*, *Cattleya Mossiæ*, *Epidendrum macrochilum*, and a large *Cattleya alba* of the *Mossiæ* breed.

Mr. Dunsford, from Chingford, Essex, had *Stanhopea oculata*, *Saccolabium guttatum*, *Cyrtorchilum maculatum*,

Oncidium pulvinatum and *flexuosum*, and *Epidendrum leucochilum*.

There was a fine specimen of *Angræcum caudatum*, with two long spikes, without name of owner. An *Epidendrum*, new species, from Mr. Carson, with upright spikes of pale yellow flowers. Also the same *Ornitharium striatulum* which he showed as a new plant last season; it is of no beauty, however. He had, also, a fine specimen plant of *Roupellia grata*, a large stove climber, with bunches of light flowers, a *Hoya bella*, and a fine *Dipladenia crassinoda*.

GLOXINIAS.

The Messrs. Henderson, of Wellington Road Nurseries, and the Messrs. Rollison, showed a dozen hybrids each, chiefly of the upright sorts. The best of those from the Wellington Road Nursery were *Princess of Prussia*, *Ernest de Tallyrand*, *Carthusiana*, *Alba aureolata*, *Frances*, and *Violetta*.

The best from Tooting were *Maria Paulownia*, *grandis Rex ignescens*, *Coronata*, and *Helen of Orleans*, with a new hybrid *Achimenes* called *Dr. Hoff*; a light lilac, with a darker eye; and some others.

NEW PLANTS.

Mr. Ingram had his new cross from *Achimenes picta*, and four *Kalosanthes*, or *Crassula*, hybrids of the *Miniata* stamp, with different degrees of white in each. Mr. Wooly had six well-grown Gloxinias. M. Linden sent, from the Continent, but not in bloom, two kinds of *Calatheas* (not *Calanthus*), one called *Pardina*, meaning that it is marked with broad spots like a panther—these are two black rows of markings, one on each side the midrib. This will make a good addition to the variegated plants. The second *Calathea* is called *Metallica*, having a shining lip, with two shades of green; and a fine-looking *Melastomad*, called *Calypttraria hæmantha*. This is by far the best plant that was shown at Chiswick for the last twenty years; it was only six inches high, and had four pairs of leaves. As far as I could see, nobody took any notice of it all that day; and were it not for THE COTTAGE GARDENER, M. Linden, of Brussels, who sent it over as a gem of the first water, would gain nothing for his trouble. But I pledge my word that this *Calypttraria hæmantha* is the newest name among *Melastomads*, and the best stove or moderate stove plant that ever was exhibited, not only in England, but in any part of Europe, not forgetting *Amherstia nobilis* and *Medinilla magnifica*. In all likelihood, it will come from cuttings as freely as a Scarlet Geranium, and about as easy to grow into a good specimen as a new Fuchsia. This plant exemplifies the difference in taste between us and our next-door neighbours across the channel. Anywhere abroad, such a plant as this would have received the first gold medal; in England, the Judges passed over it without giving the slightest heed to it, and gave good medals to most trumpery things—new plants, I mean—on each side of it, because they were in flower. Verily, if public taste wants refinement in this country, public and private judgment amongst us wants a good deal of pricking from behind the garden-gate. But in all this I blame no one. I know that Dr. Lindley has said that this is "one of the most glorious of plants," and that the Horticultural Society believe every word he says about plants, therefore, public taste is the only thing which is at fault in these matters; why, therefore, would the Society fight against this taste with a low exchequer? As I have said above, I shall not lose sight of *Calypttraria hæmantha* until it is as common in our stoves as the *Franciscas*.

Another excellent new plant was a dwarf, close, bushy *Ixora*, called *floribunda*, from Java, by Mr. Veitch. Here, again, I predict that this *Ixora* will become a

universal favourite with amateurs, on account of its dwarf, compact habit, and for uniting in one head of bloom the "properties" of *Ixora coccinea* and *crocata*.

There were six pots of a new annual from Mr. Veitch, and from California, called *Fenzlia dianthiflora*. This is a little darling, for which many of us old gardeners have been anxiously looking for the last twenty years. There was a private revolution here, in England, in the summer of 1833, which was "put down" by Mr. Bentham, in October of that year. He told us then that there was an amiable author, then publishing in Vienna, called Dr. Fenzl, and that a charming little annual, of which he had dried specimens from Mr. Douglas, was a fit and proper plant to represent the modest virtues of the German Doctor; that the flowers of this little charmer were the prettiest of all the Gileadads, as Sandy McPharlan would say; and that, for more security, he, the said Mr. Bentham, would place Dr. Fenzl's name-sake just between Gilea and Leptosiphon, where it stands to this day. It is only a few inches high, and does not open its pretty delicate blossoms when it rains. You must pronounce it by putting the accent on the *e*, and sounding *z* like *s*—*Fénslea*.

Mr. Veitch had another new plant, from "Vogel River," in Africa, as the tally said; but they might just as well have said Spalding River, in Europe. This was a dull Pentstemon-looking blossom, on a plant of some *Siphocampylus*. It is closely related to the Pentstemons, and is called *Phygellus Capensis*, and will, probably, grow in the open borders in summer.

The charming new tree Phlox (*Leptodachylon Californicum*), the *Phlox speciosum* of Pursh, was there again, from Mr. Veitch, and more full of flowers than it was in June. It is also likely to hold on some time yet, therefore, if it should not make a bed for the whole season, it will last long enough to make it worthy of the very best flower in the garden of a Queen or Empress: it is a lovely thing to look at. He had, also, a new pinkish Lupin, from California, of the *Polypyllus* class.

Mr. Anderson, the great cross-breeder, near Edinburgh, sent three new botanical plants of no garden interest; two kinds of *Gilia*s, and a kind of *Salvia*-like thing; but none of them were like the types of *Gilia* or *Salvia*.

The new *Princess Royal* Rhododendron was also there, from Mr. Veitch, and fully as good as it was in June.

Hemiantra pungens, from the Messrs. Henderson, of the Wellington Road Nursery, is not an old plant, and is another of those lady-like plants which you cannot help admiring. It is a dwarf, greenhouse species, with lilac flowers, and was sold three or four years by, I think, the Messrs. Frazer; at any rate, it is a very nice thing, as also another plant from the same firm, called *Stoledium scandens*. This has a crowd of bright-pink flowers, which put you in mind of *Oxalis rosea*, which *Oxalis*, by-the-by, is a most excellent summer annual for the cold show house, if the seeds are sown in heat early in March, and the plants have a few short sticks to run about on.

There was a new cross-breeder with a collection of *Variegated Geraniums*, Mr. Barter, gardener to T. Lenox, Esq., Chiswick. I believe they were of three strains, but being not in bloom, who can decide their merits? However, Mr. Barter had a prize for them. Mr. Gains had three good specimen plants of his *Variegated Attraction*, and three of *Flower of the Day*, in a collection, in very good order indeed; but the *Attraction* Geranium from the Messrs. Lee is a very different thing. Mrs. Conway, of Earl's Court, Brompton, had a more varied collection of these beautiful *Variegated Geraniums*, in which was the best specimen of the *Golden Chain*, in Europe, as far as I know. Also, *Flower of the Day*, *Mountain of Light*, *Lee's Attraction*, *Silver-striped*

or *Old Variegated Scarlet*, and a new one, which was lately sent out, I think, by Mr. Osborne, of Fulham. It is called *Brilliant*, is a good Scarlet for a bed, and the leaf is more after the Mangle's Variegated than any of them; and if it holds true in the open air this would make a very distinct bed.

There was a large collection of very pretty *Sweet Williams* in pots, and in cut flowers, from Mr. Bragg, of Slough, and two collections of pot *Verbenas*, grown on two different plans; one being upright plants, and the other trained-down plants, on a flat, circular trellis, a little above the pot. This is the best plan for many of the *Verbenas*; but it is quite evident that *Verbenas* may be grown in pots, to vie, in size and bloom, with the *Pelargoniums*.

ROSES.

Cut Roses were in abundance and in good condition. The finest of them, and the best cut Roses which I have seen this season, were from Mr. Mitchell, of Piltdown Nursery, Maresfield, Sussex. Among them *General Jacqueminot*, a hybrid perpetual, was the best high-coloured Rose ever exhibited. *Paul Ricaut*, *Duchess of Norfolk*, and the *Geant des Batailles* must yield to it, as exhibited by Mr. Mitchell. Messrs. Lane, Paul, Francis, and Wilkinson, also showed extensively; but to run out all the names would fill two pages, and then be of little use, without remarks to guide those who do not know them individually. Mr. Busby, gardener to J. Crawley, Esq., Mr. Levy, gardener to Lady Pullen, and Mr. Munro, gardener to the Earl of Clarendon, were among the private exhibitors of cut Roses.

FERNS AND LYCOPODS.

There were two or three collections of *Ferns*; but not knowing much about them, and not seeing any very particular sorts, I did not take their names; but *Lycopods* I do know, and admire in preference for amateurs. They were very good indeed at this show, and stood in the names of Messrs. Veitch, Wooly, and Gidney. The upright ones are now called *Selaginella*; they were in sixes, and placed in pairs, one above the other, and Mr. Veitch, who seems determined to practice staging for effect, places them thus—*Cordata* and *Wildenovi* in the centre; *formosa* and *Galeotti* on one side, and *umbrosa*, with *inaequalifolium*, on the other side. Here the two flank pairs were as well-matched as this kingdom can produce, while the centre was sufficiently distinct from the more delicate and longer leaves, or fronds.

Mr. Wooly had his thus—*Wildenovi* and *Mertensi*; *flexuosum* and *caesium arboreum*; *umbrosum* and *Casium*; and Mr. Gidney thus—*Mertensi* and *stoloniferum*; *Wildenovi* and *caesium arboreum*; *apodum* and *viticulatum*. *Apodum* is the dwarfiest, and the most compact of all *Lycopods* known to us, and the right sort for amateurs for planting in such bulb pots as flower without leaves, as the Guernsey Lily, or any such

VARIEGATED PLANTS, AND FINE-LEAVED PLANTS.

Now, I have 150 names, or plants, rather, to mention under these heads, and I could make a lecture on them, if I had room, but too much of a good thing is not a good thing; besides, I am asked by a correspondent to give a detailed history of certain variegated plants which are named in former reports, and it occurred to me that I might do worse than give a full view of a good number of the plants belonging to these two classes, and, perhaps, my own private opinion on their fairness for this style of exhibition. At all events, I shall lump a good many of them in the way I have been asked for the variegated. D. BEATON.

AVERAGE ILLNESS AMONG THE LABOURING CLASSES — Mr. Finlaison, in his second report upon Friendly Societies, affords some interesting information. At the age of 45 he states that 99 out of 100 benefit clubs close their doors to the admission of candidates, and we find that above that age the number of illnesses begin to increase. Between 15 and 16 the average number of days per annum with persons engaged in general labour is $6\frac{1}{4}$; between 16 and 26, $6\frac{3}{4}$; between 26 and 36, 7; between 41 and 46, $8\frac{3}{4}$; between 46 and 51, $10\frac{1}{2}$; between 51 and 56, $12\frac{3}{4}$; between 56 and 61, $16\frac{1}{4}$; between 61 and 66, $23\frac{1}{2}$; and between 66 and 71, 36 days. Mr. Finlaison adds, on an examination of the amount of sickness per annum recorded for the whole mass of the male members of friendly societies, from the age of 15 to that of 85, it may be premised that almost exactly five years' sickness is undergone by the man in the 70 years of time. But during the period of labour—that is, from the commencement of the 16th year of age to the close of the 66th—there are in this 51 years but 78 weeks, or exactly one-year-and-a-half of sickness. Further, that in respect of this period of labour, the sickness, during what may almost be termed its second moiety—viz., from the age of 41 to that of 66—is almost exactly the double of that undergone in the previous moiety—from the age of 15 to that of 41 years. For the sickness during the first 26 years of manhood is exactly half-a-year, or $182\frac{1}{2}$ days, while it is $362\frac{1}{2}$ days, or almost exactly one whole year, during the next ensuing 25 years of maturity.

NORTHAMPTON HORTICULTURAL SHOW.

JULY 12.

THERE are several things that seem essential to the success of floral exhibitions, such as first-rate specimens of horticultural skill; favourable weather; good music; and an opportunity for visitors to promenade upon the green sward, or along the shaded walk, according to the bent of their inclinations. I use the word *success* in a *pecuniary*, and not merely in a horticultural, point of view. The most splendid specimens of horticultural skill may stand upon exhibition tables unnoticed, save by the enthusiastic few, because a drenching day may prevent the sweet flowers of humanity going to inspect those "stars of the earth," those gems of vegetable loveliness, between whom and our sisters—aye, and our world-wide brothers, too—we trust that there will be a growing influence, a more than mesmeric attraction, and power to elevate and refine. All accounts concur in speaking in the highest terms of the *Exhibition at Chiswick on the 11th*; but how few could there be to admire! on a day in which the rain had no resting point. Such a matter is of less importance to a wealthy Society, and especially to one where the great proportion of the tickets have been issued beforehand; but to a provincial institution, and especially to one that has gone to considerable expense in previous preparations, and whose pecuniary resources depend, to a great extent, upon the entrance-money of visitors, such a *pouring day* as that of Wednesday would too often be the precursor of paralysis and extinction.

In the present state of the Great Horticultural Society, I, and every gardener with whom I have conversed, deeply grieved that such a day should be experienced on the concluding *fête* for the season; for though a dead loss could easily be got over by an institution supported by the wealthiest in the land, were the most affluent members, for once, just to double or treble their subscriptions, I would rather have rejoiced that the somewhat waning good fortunes of this noble Society—that was the first in the field, and has done an untellable

amount of good in stimulating to improvements in every department of gardening—had commenced a career of fresh prosperity, and a more diffused sympathy for its legitimate objects, by some twenty thousand people traversing its lawns and the beautiful grounds of the classical demesne of Chiswick House.

Many would be the dismal forebodings on the Wednesday, as to the character of the following day; not so much among gardeners—though even they would be anxious—as among their fair friends, who purposed gracing the Horticultural Fête at Blisworth. Two years ago, the day appointed for the *fête* proved a perfect deluge at the same place; and after such a day as Wednesday, the most enthusiastic must have retired to rest with but faint visions of the sunshine and beauty of the Thursday. “Hope ever; never give up,” are mottoes worthy of a place in every gardener’s note-book. To a Society without resources, such a deluge might be ruinous; but even that might be neutralised by a previous understanding with the various parties concerned; and, as at Blisworth, two years ago, the plants, &c., could remain until another day, and even have more added to increase the attraction. A Society *may* keep up a respectable standing, and have its gatherings in rooms, or halls, because its subscribers and the thorough enthusiasts will attend; but for a floral or horticultural society to gain a hold of the popular sympathies of a town or neighbourhood, the shows during summer must be held in a garden, or park, sufficiently large and diversified to suit different tastes. Many judges allow that there have been fine specimens of horticultural skill shown at the George, and at the Exchange, at Northampton—judges of music have also allowed that that was good, though, perhaps, from the high-vaulted roof, a little too crashing. Fair or chief market days were generally chosen, when country folks were obliged to come to the town; the weather was in general propitious, and yet I much miscalculate if ever there were much more than a tithe in the Exchange Rooms of the happy faces that lighted up with their joyous smiles the

BLISWORTH GARDENS.

As I left while yet visitors were crowding in, I can form little idea of the thousands of visitors present. The gardens belong to the hotel, close to the Blisworth Station, and, as they deserve to do, answer well as a commercial speculation. Many trains stop at Blisworth for a short time, as the junction takes place there between the North-Western and the Northampton and Peterborough lines. The station-master is well known as extra obliging, and any one fond of seeing a well laid out place, combining a dash of the artistic and the romantic, might obtain a bird’s-eye view in ten minutes, though an hour or more would not be lost. The entrance leads the visitor to a broad walk, terrace-fashion, overlooking, at parts, a fine, open, level piece of lawn, at a considerable depth below, where the canvass tents were placed, and well fitted for various recreations and amusements. A walk narrower, and not so elevated, surrounds this lawn on the opposite side; and farther on there are winding walks kept more carelessly, or picturesquely, in a wood, or grove. There are many entrances from these elevated walks to the level area by means of staircases of turf, widening out gracefully as they approach the gravel. Behind the main terrace walk are several other narrow ones cut out in the bank, concealed from each other by laurels, and furnished with recesses and rustic benches, some of which bore traces of being pretty well used up. At one end, and overlooked by the terrace walk, is a neat flower-garden, the beds following each other in circular form, some two or three feet in width, and divided by grass bands of about three feet in width. These would present fine masses of colour, if grouped, and be seen to the very best

advantage when so looked down upon; while the narrowness of the beds would effect a saving in plants. In such a position, warm colours should be chiefly used. With the exception of masses of Geraniums, Calceolarias, &c., most of the borders and clumps seemed to be planted on the mixed style, which has many advantages for a public garden, as there will always be something in bloom.

I observed great quantities of the purple *Dahlia Zelinda*; that, in my opinion, looks best in a dense row, or bed, fringed with yellow or white; planted early, it would thus be magnificent by the end of July, and continue until frosted. I also noticed great numbers of the *Cineraria maritima*—the frosted-leaved plant—growing among Scarlet Geraniums, and to be pegged down as an edging. I think Mr. Beaton recommended it for giving an edging like frosted silver. The gardens have been laid out by the present gardener, and reflect great credit on his taste and judgment. I presume that visitors get what refreshment they ask for in the gardens; but I may mention, for the satisfaction of the tetotallers, that at the entrance there was a small house filled with cups and saucers, showing that tea and coffee were in great requisition.

The exhibition, as respects floriculture, especially, was a very good one. The thick cream of the show was to be found in the cut Roses, the miscellaneous groups of Plants, the Fuchsias, Gloxinias, and Achimenes.

ROSES.

These were shown in great abundance, and in great magnificence. Mr. Lane sent a number of boxes for display, which added to the interest of the exhibition. He took the first prize for the nurserymen’s class, and Mr. Archer came in with a fine lot as second. Among private growers, and gentlemen’s gardeners, there was a spirited competition for eighteen bunches of three Roses each. There were few faulty Roses, and many very large and fine. The prizes were taken by Mr. Wake, Captain Maunsell, and Mr. Gardener. It will be recollected that Captain Maunsell showed fine specimens last year, and sent an account of his mode of treatment to this work. In the collection of twelves there was also a spirited competition—the prizes being taken by Mr. T. G. West, Mr. Thorney Croft, and Mr. Barber. Among Mr. West’s collection were extra fine specimens of *Mrs. Bosanquet*, *Eliza Suavage*, *Madame Laffay*, *Baronne Prevost*, *Coupe d’Hebe*, *Malmaison*, *Cloth of Gold*, fine, budded on a briar; *Geant des Batailles*, and *Smith’s Yellow Noisette*, very fine, taken from a standard standing a short distance from a south wall.

Prizes were also given for the best Roses—the competition open to all comers; and here, perhaps, were congregated the finest grown species. In some groups I could not discover more than from two to six flowers the least defective, almost every one being at its best state, neither over blown nor under blown. Capt. Maunsell seemed to have thrown his chief strength into this contest. The prize-men were Capt. Maunsell, Mr. Lane, of Berkhamstead, and Mr. Batty, nurseryman, at Rugby.

Capt. Maunsell exhibited extra fine specimens of *Mrs. Bosanquet*, *Robin Hood*, *Chenedolle*, *Comet*, *Baronne Prevost*, *William Jesse*, *Lady Alice Peel*, *Blairii No. 2*, *Baronne Hales*, *Jules Margette*, *Duchess of Sutherland*, *Paul Joseph*, *Geant des Batailles*, *Vicomtesse des Cazes*, and *Paul Ricaut*.

In Mr. Lane’s collection were, in addition to others, very fine specimens of *Narcisse*, a fine yellow; *Shakespeare*, a fine Gallic Rose; *Crested Moss*, *Jaune Desprez*, *General Castellane*, a fine, deep crimson; *Paul Ricaut*, and *Baronne Prevost*.

Mr. Batley, among others, exhibited very fine specimens of *Brennus*, *William Jesse*, *Edward Jesse*, *Mrs.*

Elliot, Malmaison, Geant des Batailles, and Queen of Bourbons.

There was not a stand, or box, present that was not worthy of commendation, and would, in many places, have been good enough to carry off the principal prizes. The changeableness of the weather lately, from rain to sunshine and the reverse, following such a course of dry weather, entailed difficulties in securing first-rate blooms that can only be appreciated by those who have tried. Whether the visitors thought of this or not, they gave indubitable proofs, by their clustering round the stands, that they appreciated the beauty and fragrance of the Roses.

GLOXINIAS.

These were shown by nurserymen and gardeners, those of the latter being much superior to the former. Even these, however, though possessing fine foliage, and large, well-formed flowers, were not so effective for display as they used to be at Northampton, because the flowers were not so thickly studded. This I attribute to no abatement of cultural skill, but to the introduction of newer kinds, which, of necessity, must have smaller roots. To combine luxuriance with redundancy of bloom, roots about three years old are generally best. When the *corms* get very old and large, there is an excess of flower, with a diminution of luxuriance, unless very large pots are used. Seedlings, sown early in spring, and cuttings made then, will produce nice flowers in the autumn, and better the following year, but they will not be so prolific in bloom as older plants. Mr. Gardener and Mr. Mackie stood respectively first and second.

ACHIMENES.

These were viewed with a mingled feeling of delight and regret. Mr. Gardener and Mr. Mackie had the field again to themselves. Mr. Gardener exhibited much the same sorts as last year. So far as I recollect, a huge bush of *longiflora major*, and the white *margaretta*, were, perhaps, the most striking. All the six plants were perfect specimens of horticultural skill. The branches were not so thick as last season, and looked all the more elegant in consequence, there being a little light and shade to show the flowers off to advantage. Of course, these plants had been neatly staked, but not a twig was visible. It is not the crutch I find fault with, if it be necessary, it is the obtruding the sight of a faggot of these upon the eye, as if there was beauty in whittled stakes that lent a charm to the plant so crutched and bolstered. Mr. Mackie, unfortunately, in the present instance, dispensed with stakes altogether, and substituted a raised one in the centre, with a somewhat semi-circular wire-guard, through which the shoots might pass, and be held in their places without the assistance of sticks. Such a mode would answer perfectly for home embellishments, as the plants could be carefully lifted from place to place. In the railway vans from Northampton, the points of the shoots had rustled against each other, and the flowers were much damaged. In some cases, the longer shoots might be secured in bunches to stakes, and then these stakes be removed at the exhibition-table. Excellent, however, as we conceive the idea to be, it is more fitted for the parlour and the greenhouse than for travelling. Some of the plants were very large, something like a yard in diameter, and trained out from the sides of the pot, so as to form nearly two-thirds of a ball. From the mass of unopened buds the plants will be fine a week hence. There was a small plant of *Achimenes Chirita*, treated in the same way, but the branches were all secured, and the flowers did not suffer, but I should not think it would ever assume the massive appearance of *longiflora major*, *Margaretta*, *Tugwelliana*, *patens*, &c.

I have been at *Courteen Hall* and *Delapre*, and, considering what is attempted, the plants that *have* to be grown, with the conveniences at command, it would be an honour to produce second-rate articles; and the honour is proportionately increased when from such means such fine specimens of cultivation are exhibited.

FUCHSIAS.

There were four groups exhibited: two belonging to the nurserymen, Messrs. Jeyes and Perkins; nice, stubby, little plants, well grown, which would have commanded more attention, but for the fine groups of Messrs. Mackie and Gardener. These were placed equal first, and well worthy they were of it. They were grown in the one-stem pyramidal style, furnished with branches all round, densely covered with bloom. Both gentlemen placed a light and a dark variety in pairs. Mr. Mackie showed *Banks's Glory*, *Duchess of Lancaster*, *Matildiana*, *Nil Desperandum*, *Ajax*, *England's Glory*, *Kossuth*, and a *Lady Something*, a light one.

Mr. Gardener showed *Gem of the Season*, *Diadem of Flora*, *Matildiana*, *Nonsuch*, *Splendissima*, *One in the Ring*, *Pearl of England*, *Kossuth*. Besides these, Mr. Mackie contributed a number of large, tall, well-grown plants for the filling up of the tables, which were much admired, highly commended, and received an extra prize.

MISCELLANEOUS COLLECTION OF PLANTS.

Mr. Jeyes was the only nurseryman that exhibited in this class. Most of the plants were small, and among them were neat plants of *Hebeclinium ianthemum*, so useful for giving lilac *Ageratum*-like flowers in winter and spring; *Echites atropurpurea*, *Mitraria coccinea*, *Erythrina cristagalli*, and a neat bush of *Cytisus Atteana*, one of the very best for greenhouse decoration, as it hardly knows how to give over flowering.

Among gentlemen's gardeners, Mr. Gardener stood first, and Mr. Mackie second. Mr. Gardener had a fine dwarf plant of *Vinca rosea*, a *Achimenes longiflora major*, two feet high from the surface of the pot, and three feet-and-a-half in diameter; *Erica Cavendishii*, well bloomed; *Clerodendron squamatum*, with four spikes; *Kalosanthes coccinea*; *Erica vestita alba*; *Lantana mutabilis*, a stiff, bushy plant, smothered with bloom, produced, I believe, by growing it fully, then checking it suddenly, and giving air and light to set the flower-buds; a *Clerodendron fallax*, with four spikes; *Vinca rosea alba*; *Pimelea decussata*; *Pimelea Hendersonii*, fifteen inches high and twenty inches across, a neat bush, smothered with bloom; and *Mitraria coccinea*, well bloomed. I was lately informed, by a successful grower of this plant, that it requires resting a little, placing it in a temperature intermediate between stove and greenhouse, to grow it freely, and then returning the plant to an airy greenhouse when the flowers appear.

Mr. Mackie exhibited a nice plant of *Gloxiana Duke of Wellington*; a neat, healthy, well-flowered, small plant of *Boironia serrulata*; *Achimenes patens major*, large and fine, and not injured by carriage; *Allamanda cathartica*; *Allamanda Neriifolia*, a huge bush; *Erica tricolor speciosa*; *Indigofera decora*, an interesting plant, when, as in this case, it was well studded with its pink racemes; and a huge plant of *Crinum Asiaticum*, with a very fine spike of bloom.

For the Miscellaneous Collections, open for competition to all comers, Mr. Brown, gardener to Sir Charles Knightley, Fawsley Park, took the first place, and Mr. Jeye's nurseryman, Northampton, the second place. Such a collection as that of Mr. Brown's is seldom seen at a provincial exhibition. This group consisted of two *Ixoras coccinea*, one having thirteen fine heads of bloom; two huge masses of *Coleus Blumei*; two great barrel-shaped plants of *Allamanda cathartica*; two

large plants of *Allamanda Schottii*, better bloomed than *cathartica*; two fine plants of *Cissus discolor*; two *Vinca rosea alba*, one measuring three feet in height from the surface of the pot, and above four feet in diameter, smothered with large flowers, the other not quite so large: *Rivina levis*, two-and-three-quarter-feet from surface of pot, and above three feet in diameter, in high luxuriance, and covered with long racemes of white flowers and red berries; a neat plant of *Aphelexis macrantha purpurea*; a *Dipladenia splendens*, with two bunches of bloom; a young plant of *Clerodendron fallax*; and in the centre of the group, a huge plant of *Medinilla magnifica*, the foliage not so large as on younger plants, but literally covered with its bunches of bloom: I counted above forty, another counted forty-five, and a third made the number close on fifty spikes.

Mr. Jeyes showed compact, well-grown, and well-bloomed plants, among which were the following:—*Aphelexis macrantha*, and *Aphelexis humilis*; *Ericas depressa*, *Bergiana*, *tricolor*, *recurva*, *inflata alba*, *ventricosa*, and *Cavendishii*; *Cissus discolor*; *Erythrina cristagalli*; *Pleroma elegans*; and a fine plant of *Statice Halfordii*.

Besides these there were good, compact, dwarf Cocks-combs, from Mr. Barber; and three collections of BALSAMS from Messrs. Mackie, Brown, and Barber; the first being small plants covered with fine flowers; the second, large bushes, but with the central stem only in bloom; and the third, nice stubby plants, but the bloom not equal to the second lot.

There were also several lots of Geraniums, from nurserymen and private growers; but not equal, or come-up-able, to the beautiful specimens of Achimenes, Fuchsias, &c. In one nurseryman's lot the plants looked very interesting in their three and four-inch pots, and no doubt some young gentlemen would be glad to find whence such little beauties could be brought next day, to grace the parlour window of the lady that hung so trustingly on his arm. A little difference of opinion respecting these Geraniums, may, at an early period, lead to a ventilation of the principles upon which awards should be made, *with* or *without* rules for guidance, and as no particulars need be entered into the discussion can do no harm.

I can do no more than mention some good PINKS, and especially Seedlings, exhibited by Mr. Archer; two collections of wild flowers, containing very nice things; two collections of hardy Herbaceous plants; and two of *Antirrhinums*, very interesting and very pretty, but which I would discard from bottles, and have them grown and shown in pots, and thus reward cultural skill, as well as the ability to purchase. Two beautiful bouquets, the first, belonging to Mr. Brown, being done in the flat, horizontal style, all the fashion now, though I never could see how; and the other in the pyramidal style, with defenders all round, belonging to Mr. Barber; a good plant, but without any bloom, of *Aphelandra Leopoldii*, exhibited by Mr. Brown as a new plant, and interesting, by the white bars that traverse in straight lines the green leaf; and three floral devices, all very neat indeed, and all suitable for flower-gardens. I forget who had the third. Mr. Barber was second, with the same device as last year, but coloured with masses of bloom in a different way; and to show, by a little alteration, its suitability for a flower-garden, I may mention, I have seen the identical plan laid down at a place, this season; and the first, a very neat, oval flower-garden, with sand or gravel-walks all complete, and grouped with the various colours, and all by the hands of a lady, and one who, most likely, took her idea of having little standards as starers in the principal beds from the pages of THE COTTAGE GARDENER. It was expected by some, that our friend, Mr. Beaton, would have been there to see it, and other things at the exhibi-

tion; but as he was not there, I will guarantee, that if the plan was sent him, through the Editor, he would be able to give a better opinion upon its merits, and the mode in which it was planted, than I could do in a few minutes' passing survey.

OF FRUIT there was very little—even Strawberries were at a premium. Mr. Gardener showed one fine dish of *Keens' Seedling*. Mr. Mackie had a good Melon; Mr. Barber had good Black Grapes, and very good *Muscats*. To show the dearth of fruit, there was a collection of six dishes, in which there were green-black Currants, red Currants, and Gooseberries. There are ample resources in the neighbourhood, could they be brought out. Some noblemen's gardeners I met with, as old friends, in the afternoon, could have done much to remedy the deficiency.

VEGETABLES, as usual, were good; but not in such numbers as in spring and autumn. Mr. Watts, I believe, as usual, carried off the laurel-wreath among market-gardeners; and Mr. Brown stepped in before Mr. Gardener, among gentlemen's gardeners; but only by a shade of a shade. The Potatoes of both gentlemen were very fine, and far before any I could get in the open air. The Globe Artichokes of Mr. Gardener were, also, for the season of the year, very fine. Cucumbers were shown in great force, but mostly too large and old for eating; and Salads were also competed for by several in a spirited manner.

I have previously mentioned the Fuchsias exhibited merely for decorative purposes. In addition to these, a group of Hardy Ferns and Coniferæ, sent by Mr. Jeyes, were commended to notice; and also a large collection of VERBENAS, sent in pots by Mr. Perkins. Mr. Perkins thus did a great favour to the flower-gardeners present, enabling them to make a selection for themselves. I will chronicle a few of these. *Blue Beard*; either the published plate of this is wrong, or Mr. Perkins has not the real *Simón Pure*. What was shown was a fine purple, but no more blue than I am, when all is serene. *Violacea*, purple, with white eye. *Rouge et Noir*, very dark, with white eye. *William Barnes*, a fine, dark, shaded, variety. *Madame Jarden*, mottled. *General St. Arnaud*, deep crimson, with white eye. *Ladresa*, whitish, with pink eye. *King of Scarlets*, strong-growing and bright. *Tyrian Prince*, fine purple, with white centre. *Purple King*, one of the best purples, but not equal to the *Blue Beard* above. *Saracene*, purple and white stripe, much the same as *Madame Leonora*, is a striped pink and white. This *Saracene* is a regular meeting of an old friend under a new title. I gave away hundreds of the same thing years ago; and, as I never named it, each receiver did so for himself. I had no credit in raising it. A shoot of *Emma* came striped; it was propagated, and, by slips, became the father of thousands. The only objection to it was, that it was subject to mildew. Mr. Perkins showed many varieties besides, but chiefly of the shaded, large-flowered kinds, more suitable for pots than for beds. For the latter purpose, small flowers generally answer best, as being least influenced by wind and wet.

NEW PLANTS.—In addition to the *Aphelandra* shown by Mr. Brown, Mr. Jeyes exhibited three plants that were new to me, namely, *Achimenes Teherene Thomas*, a fine, deep crimson, promising for a good thing, but only a small plant shown. *Salvia Perphyranthus*, a small, red, tubular flower, in the way of *Scutellaria coccinea*, and worth trying for bedding, not likely to be strong. *Begonia splendida*; there were no flowers, but the leaves were very peculiar, having a rough, green appearance, dashed with crimson. If the flowers are good it will be interesting.

R. FISH.

MARKS ON TEA CHESTS.—When a ship loaded with Tea arrives in a Dock in London, each chest is marked with the *rotation* number, that is, the number she is as to arrival in the Dock; the first ship in January is marked 1.; this is cut with a *scribe*; also the date of the year shortly, as /55; also each chest is numbered, as, if there are 3000 chests on board, they are numbered from one upwards; no mark of the whole number on board is made on each; the weight of each chest is also cut on it after being weighed.

THE STRAWBERRY "SIR HARRY."—I have much satisfaction in announcing the result of my crop of "Sir Harry" Strawberry; I must confess that I have never eaten anything so delicious; and I assure you that Mr. Underhill did not speak too highly of the qualities of this beautiful fruit, which, in reality, is far superior to any other known, and, consequently, cannot fail to find its way into the garden of every true "amateur." The plants which I kept under glass proved that "Sir Harry" is equally well adapted for forcing; it even seemed to me that its fruit had a better flavour than those grown afterwards in the open air.—F. GLOEDE, *Aux Sablons, near Moret sur Loing, Seine Marne, France.*

BIRMINGHAM BOTANIC GARDEN AND HORTICULTURAL EXHIBITION.

At this Exhibition I had to adjudge the prizes, ably assisted by my friend Mr. Baxter, Curator of the University Gardens at Oxford. The arrangement for the Exhibition was so excellent that I took notes, and shall now endeavour to put them into shape, to give our readers some idea how they manage their shows in the Botanical Gardens at Birmingham, under the judicious direction of Mr. Catling, the Curator.

As the Judges were not allowed to enter the Exhibition tent till all was arranged, I took a quiet, early stroll through the hothouses, greenhouses, and pleasure-grounds, and I am happy to bear testimony to the very excellent condition, in respect to management, they are in. I mentioned, in a report of these gardens, last year, that the Council of Management, with a liberality that did them honour, erected a house for the especial purpose of growing the Queen of Aquatics, the *Victoria Regia*. By the advice of their Curator, this building was put up large enough not only to hold the large tank for the Lily, but also with plenty of space around it for a roomy promenade, and also accommodation for groups of Exotic Ferns, and a platform all round the house for Stove Plants. By thus having plenty of room for such plants the house is interesting, and gay with foliage and flowers all the year. The heat and moisture necessary for the *Victoria*, when growing, suits other Exotics admirably; and in winter, when there is no Lily to draw attention, these plants render the house nearly equally as attractive. Without making any comparison with other places where they grow the *Victoria* alone, I may venture to suggest, that whoever, hereafter, is at the expense of a house to grow this truly noble aquatic, would find it advantageous to visit these gardens, and judge for themselves whether this example is not worthy of adoption. There is one point in the form, or rather level, of the tank of this house that might be improved. At present, the tank is nearly level with the floor of the house; I think it would be better if it was raised two or three feet, that is, if water can be had conveniently to fill it when so raised. The great advantage to be attained by thus raising the sides of the tank would be the heat given to the water by the rays of the sun, and

also by bringing the leaves and flowers of the Lily nearer to the eye. I was glad to find my friend, Mr. Baxter, was of the same opinion as I was, that this alteration of the level of the tank would be a great improvement; and he instanced the one at Oxford, under his care, as a proof of the benefit the *Victoria* derived from the walls of the tank being raised, and thereby exposed to the warming rays of the summer's sun.

These gardens have been famed for years for a large collection of *Ferns*. Mr. David Cameron, the late Curator, was indefatigable in collecting them. He, however, had no such large house as the *Victoria House*, and, consequently, was obliged to grow them in small pots, and place them in nooks and corners, and on shelves, wherever he could find space to stow them. Now the case is widely different; Mr. Catling can pot and repot, and grow them into fine specimens. As an instance, I may mention that I saw a single plant of that beautiful Fern the *Adiantum cuneatum*, two feet high, and three feet through. I might mention many others equally fine, had I space; but I must curtail my notes, or I should have matter enough to fill an entire number. Last year, I described the groups of Ferns, and, to my agreeable surprise, I find them this year arranged in a new style, and, I think, with better effect. Two groups still remain as then; but the rest are arranged and combined with good effect with Palms, Musas, and large-leaved Arums. These form a noble back ground, and the tall, broad-leaved Ferns are placed before them, and the low-growing, fine-leaved Ferns in front. These, altogether, form a rich circle of beautiful, evergreen foliage, at the furthest end of the house. In front of this circle is a broad walk, and between it and the tank is placed a noble *Cycas revoluta*, with its long, feather-like leaves. This plant is now flowering, and has, certainly, one of the most curious blooms in the whole kingdom of Flora. It is a male plant, and the male flowers are in a cluster, in the heart of the plant. This cluster is fully a foot in diameter. The bracts, or floral leaves, are something in the shape of a man's hand, with the fingers distorted, shortened, thick at the base, and pointed at the top. They are of a buff colour, and covered with a downy substance. The pollen masses are in pairs on each of this hand-like processes. When I saw them they were in a bud state, and about the size of a large Pea. I should have been pleased to have seen them when the pollen burst from the cases. It certainly is one of the wonders of vegetable flowering, and well worthy of a visit to inspect it.

The following Stove Plants were in flower on the platforms. *Begonias*, many species, arranged in one group. *B. nitida*, one of the handsomest species, with large cymes of beautiful, rosy flowers, made the best show. This species is apt to run up high, and has naked branches. To remedy this, and to form a dense bush, the branches were gently bent down, and pegged in the soil in the pot. The buds on the branches broke, and filled up the centre. The plants, by this management, were of a handsome, dense form, and flowered most profusely. So managed, this species would be no despicable addition to a collection of fifteen or twenty plants exhibited for a golden prize. *Euphorbia splendens* and *E. Bojeri*, both well bloomed. *Hoya carnosa*, on an upright cylindrical trellis; *H. bella*, grown in a suspended wire-basket. *Mussaenda macrophylla*, with its large, single-leaved bracts and small yellow flowers. *Rondeletia speciosa*, a dwarf bush, covered with blooms. *Æschynanthus pulcher major*, trained upright. *Pothos*, a curious tribe of stove plants, many species in bloom. *Tabernaemontana coronaria*, the single-flowered, a handsome plant. *Gesnera tubiflora*, very effective with its tall spikes of large trumpet-shaped

blossoms. *Melastoma heteromalla*, fine foliage, and long spikes of purple flowers. *Musa rosacea*, *Russelia juncea*, scarlet tubular flowers. The ever-blooming *Balsamina latifolia*, and its white-blossomed variety. Besides all these, and many others of less note, there were in this house several Orchids in blossom, brought from the Orchid-house.

The Greenhouses were gay with Calceolarias, Geraniums, Fuchsias, Heaths, &c., all attractive and pleasing to the visitors to such public gardens. This attention to what may be called popular gardening is found to be necessary in all botanical gardens dependent for support upon the public. Mere botanical objects are, it is true, useful to students of botany, and in the University Gardens of Oxford, Cambridge, Dublin, and Edinburgh, are proper subjects to be prominently cultivated in such numbers as not to leave space for ornamental varieties; but in gardens to be visited by the million, such as Kew, the Crystal Palace, Birmingham, Manchester, Liverpool, and other largely-populated towns, a display of more showy and attractive plants is, as it should be, a prominent feature.

In the grounds, I was pleased to observe that the late severe winter had not injured many plants. The Conifers were looking remarkably healthy. This exemption from injury arises, no doubt, from the nature of the soil and subsoil here. It is a bed of sandy-red loam; on a sandy subsoil of sandy rock-stone. This causes the trees to grow slowly and robust, and the young wood is ripened early. The turf, notwithstanding the dry spring and summer, was remarkably green. In front of the range of hothouses there are numerous flower-beds on each side of the noble terrace-walk, these were filled with the plants usually used for such purposes. The Verbenas had already covered the ground, and were blooming profusely. I was glad to see the Pansy filling some of the beds. I think this flower is not so much planted in masses of one colour as it deserves. Upon the whole, the gardens did great credit to all concerned in their management.

THE EXHIBITION.

The Birmingham Garden was more fortunate, in respect to the weather, than Chiswick, which took place only the day previously. The 12th inst. was as fine a day as possibly could be, and a numerous company of the elite of the town and neighbourhood attended to enjoy a day's relaxation and pleasure, in viewing the fine and useful products of the gardens brought together in one place to gratify them. The exhibition itself, as I before mentioned, was above the average, in point of merit, of any I have witnessed out of London. The arrangement, no doubt, added greatly to the effect. Mr. Catling, last autumn, cleared away a large space formerly occupied with Rhododendrons. This plot of ground, after being well drained, was thrown up in banks with rounded projecting points, and bay-like recesses with rising terraces in the wider parts. In the centre were thrown up smaller detached banks, some circular, and others in rounded angles. The whole was covered with fine turf, and the walks between gravelled. The space so operated upon is rather more than 120 feet long, and nearly seventy feet wide. On exhibition days this large space is covered with a tent. This mode of arranging plants for exhibition is the most effective and pleasing of any; far superior to the formal stage of boards, whether round or in parallels, even when covered with green baize to imitate grass. The tent was, of course, supported in the centre with strong upright poles. Mr. Catling conceived the happy idea that these might be made useful to enhance the beauty of the scene. He had strong cords stretched from each down the centre of the tent, and from them he suspended baskets (as at the Crystal Palace) filled

with drooping plants in flower, from his own stores. The idea immediately struck me, that if prizes were offered for the best baskets furnished with the most effective plants in bloom, a new attractive feature would be given to exhibition tents. They would be something like the last strokes in a fine picture giving a master finish to the whole.

It may, perhaps, be said, that all this arrangement of grassy hillocks, turfed terraces, and suspended baskets, was but an imitation of the mode at the Royal Botanic Gardens, Regent's Park; but is there no merit in imitating a good example? Mr. Catling is the first to follow that example, and has combined the attractive feature of suspended baskets. The imitation is by no means a servile one. The situation chosen for it is superior to the one in Regent's Park. It is in a kind of dell, surrounded by pleasing groups of trees, and is no bad feature in the scene, even when there is no tent or plants for which it was more especially formed and erected.

The subjects of the exhibition were arranged with a view to general effect. On entering the tent at the south end, which was the principal entrance, the suspended baskets caught the eye first. On the right was a bank of the finest grown *Fuchsias* ever seen anywhere. They were all in the pyramidal form, averaging from five to six feet high, and clothed with profusely-flowered branches, from the summit to the soil, or even below it. Birmingham is justly famous for growers of this fine summer-flowering plant to the utmost perfection.

Beyond these was a bank of Heaths, though not such large plants, nor in such numbers, as we see in the metropolitan exhibitions; yet they were very well-grown, especially the set of six from J. Ratcliff, Esq.'s garden, which deservedly obtained the first prize. These were dwarf, dense bushes, covered with bloom. These brought us to the further end of the tent. Right across it, the recessed bays were occupied entirely with the showy Pelargonium. These terraces were clothed with such plants as would not disgrace a Turner or a Dobson to have exhibited. They were all well grown, perfectly healthy, large, and covered with bloom. In the left-hand bay there were placed the collections of Stove and Greenhouse Plants. Here I found a deficiency; the plants were many of them small; not like such as Mrs. Lawrence or Mr. Collyer exhibit; yet they were respectable for a country show. In one of them was a plant of *Mitraria coccinea*, three feet high, and as much through, covered with its drooping, scarlet blossoms. We have now arrived at the end of the tent. Directly in front of the end terraces was a low, broad terrace; winding round the end of it there came in view the Fruit, consisting of Pines (very few), Grapes (in plenty), Peaches and Nectarines (a few dishes), Melons (in abundance), Strawberries (plentiful and very excellent), also Cherries (good), Currants, Gooseberries (not ripe), and Raspberries. The Fruit was backed with low-growing plants, such as Verbenas and Coxcombs, and small plants of Fancy Geraniums. This bank, or terrace, reaches across the tent; and, by the articles exhibited upon it being low, formed a beautiful foreground to the glowing bank of Pelargoniums. Keeping onwards, with the eye directed to the right, there appeared a fine collection of Petunias grouped in front of a large, handsome Rhododendron, one of the denizens of the spot, left to grow and bloom there. These Petunias were exceedingly well-grown and bloomed profusely. I never saw them so effective before; dense bushes, two feet high, and as much in diameter, with flowers, well formed, and of various colours. They were quite a feature in the exhibition. It is a great credit to the growers here to cultivate their plants so well.

Further on was seen, on a large, central terrace, the

Orchidaceous Plants, though not in such numbers as we have seen them at the Chiswick and Regent's Park; they were equally well-grown, and as freely flowered. Archibald Kenrick, Esq., of Westbromwich, was the principal contributor, though there were some good plants from John Ratcliff, Esq., of Edgbaston. Below the Orchids, we came upon the collections of Gloxinias and Achimenes, in full flower, as good as any I ever saw.

In a retired nook, surrounded by raised terraces, the homely, though certainly most useful, part of the Show, was the Vegetables. Most country shows make these a prominent part of the exhibition; but certainly such things as Onions, Turnips, Cabbages, Lettuces, or even Peas are not very ornamental objects, and, therefore, Mr. Catling, with his usual good taste and judgment, placed them in such a position that they did not interfere with the purely beautiful. I say nothing against giving prizes for and exhibiting vegetables; I think it praiseworthy to do so, and thereby encourage the production and knowledge of superior varieties.

We have now traversed the whole tent, and there only remains to notice a few salient and conspicuous points. The first is the single specimen plants. In Orchids there were two. One from Mr. Ratcliff was a splendid plant of *Aërides odoratum*. It was fully three feet high, and two-and-a-half feet diameter; I counted twenty-four perfect spikes of flowers upon it. Mr. Kenrick sent a good specimen plant of the rare *Vanda suavis*, with one good spike of its beautiful flowers.

Mr. Ratcliff had also a good *Medinilla speciosa*, with numerous spikes of beautiful pink flowers. There was also a good *Boronia decussata*, and more handsome plants of *Crassula coccinea*. These specimen plants were placed at the points between the recesses, where they formed conspicuous objects. From the hothouses in the garden there were placed in the tent some noble plants of the *Musa Cavendishii*, placed in the centre of circular, grassy mounds. Around them were some good Roses in pots, exhibited by a nurseryman, whose name I did not learn. These, altogether, had a very pretty effect.

RARE PLANTS.—From the gardens of Mr. Ratcliff came two nice, bushy plants of the new Conifer *Wellingtonia gigantea*; also a well-flowered *Impatiens Jerdonæ*. From Mr. Kenrick came the rare *Aërides Lobbii*, with four spikes of flowers, and a new *Galeandra*, not very showy, but apparently a free bloomer.

Florist's Flowers were not numerous. It was too early for Carnations, and none were exhibited; but there were some good trays of Pinks and Pansies, and one collection of the latter in pots.

The fruit was good, with the exception of the Pine Apples, which were rather small. The best Melon was one named the *Bromhall*. In Strawberries, by far the finest was one named *Sir Harry*. It was raised by Mr. Underhill, near Edgbaston. It is sufficient to say, that in flavour, size, and colour, it surpasses *Keens' Seedling*, *British Queen*, or any other variety there. It was awarded an extra first-class prize. I was informed, by Mr. Underhill, and several good judges there, that it is a prodigious bearer, in addition to the other good qualities that were apparent by the sample exhibited. The *Black Hambro' Grapes* were black indeed, and of excellent flavour. In White Grapes, the best was a dish of *White Frontignans*, almost the colour of gold, a fair-sized bunch, and excellent flavour.

The Vegetables were above mediocrity, but the dry weather, for weeks previously to the Show, rendered the Peas rather old. There was one good dish of the *Champion of England*, which took the first prize. Potatoes were excellent, clean, and bright. I noticed a red *Early Ash-leaved Kidney*, which was said to be an excellent variety. Lettuces were particularly good; the *Golden Cos* was first in that class, and the *Magnum*

Bonum in Cabbage Lettuce, both excellent, large, well blanchd, and crisp. Cucumbers were shown in numbers. The *Manchester Prize* was first; green as a leek, and as straight as an arrow, with the remainder of the flower still at the end, a proof of quick growth.

The list of the prize winners is, of course, only of local interest, and I think properly left to the local papers.

I think, from the above report, our readers will agree with me in thinking that this was a very good exhibition upon the whole, and reflected great credit upon the managers, Mr. Catling, and the exhibitors generally.

T. APPELBY.

FRENCH AGRICULTURAL NEWS.—At Algiers the corn-market is plentifully supplied, and arrivals along the coast are continual. The principal part of the grain, however, belongs to the War Administration. The crops in Algeria present the most favourable appearance; the temperature is extremely favourable, and the extent of ground sown is treble what it was two years ago. The cattle-markets of Sceaux and Poissy are most abundantly supplied. Prices, nevertheless, are still looking up. Some of the finest animals which figured at the last cattle show in the Champ de Mars have sold very high. A cow of the Devon breed fetched 2,800f. Mr. Jonas Webb disposed of his fine rams of the South Down breed for 2,500f. each. One of them was purchased by the Emperor, and the other by Abbé Fissiaux, director of an agricultural colony near Marseilles. A bull of the pure Durham breed fetched 3,200f. The bulls and cows shown by Prince Albert were bought by Princess Bacciochi. The wine trade at Bercy was very brisk during the week. Prices maintain themselves firm, and even evince a tendency to rise, owing to unsatisfactory accounts from some vine districts in the south. Languedoc brandy sells at 178f. per hectolitre, and spirits extracted from beet at 130f.

NOTES FROM PARIS.—JULY 7.

THE immediate vicinity of the Champs Elysées is in perfect keeping, not only with the architecture of the great *Palais de l'Industrie*, but also of the charming little garden of the Horticultural Exhibition. There is, first, close behind, the beautiful pleasure-ground of the Palais de l'Elysée Buonaparte, in which the first Emperor, after his precipitate return from Waterloo, walked in earnest consultation with his brother Lucien. This was the scene of his last promenade in the capital of an empire he had covered with glory, and which he was now about to leave for ever. Every walk, every tree and bush, every seat, has its historical interest in connection with the great modern conqueror. The garden of the Elysée extends from the Faubourg St. Honoré to the Champs Elysées, a distance of about two hundred and fifty yards. In the same line are several others nearly of the same length, but not more than fifty yards wide: one of these is that of the British Embassy. They are all laid out as pleasure-grounds, being mostly filled with tall, shady trees, or clumps of evergreen shrubs, arranged *à la mode Anglaise*, and which afford an agreeable shade during the very warm sunshine which prevails here.

The garden of the Horticultural Exhibition is very little more than a hundred yards long and about seventy wide; but though it is so small, its limits are carefully concealed, and it has been laid out with good taste. Looking at it from the avenue of the Champs Elysées, one might suppose it extended a good deal further; for, in fact, it is only separated from the garden of the Elysée by a narrow carriage-way, and the two gardens seem blended together.

The entrance-gate of the Exhibition is worthy of a palace; and the pavilions in the form of Chinese pagodas are much more elegant than the common tents. These are in an upright hexagonal form; the several sides, excepting that forming the entrance, have ample window-like openings, furnished

with blinds which extend outwards; but they may be let down at pleasure should the weather happen to be unfavourable. This arrangement, of course, was only made as a precaution during the earlier and later periods of the Exhibition. From this point there has been no effort made to shut out the unprofitable gaze of passers by. There is no dark screen of bushes to conceal the interior, and give the visitor a surprise when he gets to the other side. On the contrary, everything has been arranged to please the eye and pique the curiosity. There are single specimens of choice evergreens, as the *Cedrus Deodara* and *Araucaria imbricata*, planted more in accordance with the rules of art than those of mathematics. There is the fine lawn, rising and falling here and there like the gentle undulations of natural ground. It is always kept in the best order, and no person is allowed to tread upon it, a prohibition essential to its very existence, especially in the dry weather which prevails here.

As I noticed, in a former communication, the arrangement of the flower-beds, I shall now give a few details of one or two which are especially admired by every visitor.

The most beautiful is, perhaps, that of M. Vilmorin, seedsmen, of Paris. This is at the eastern extremity of the principal lawn nearly opposite the entrance. It has a somewhat circular form, and the ground is considerably raised, having a sloping border of grass near the walk, about two feet wide, and its diameter may be about ten or twelve feet. In the centre is a large bushy plant of *Cytisus*. An imaginary line traverses the circle, each half presenting a somewhat different series of colours, but the plants are about the same in height all round. Beginning at the centre of one-half the circle, we have a line of *Schizanthus Grahamii rosea*; the second line is varied, being filled with *Stocks*, *Violets*, and *Mimuli*; the third line, *white Iberis*; the fourth line, *purple Leptosiphon androsace*; fifth line, *blue Kaulfussia amelloides*; sixth line, *rose Saponaria calabrica*; seventh and last line, *yellow Leptosiphon*. Beginning at the centre of the other half, we have a mixed line of the white and rose varieties of *Clarkia*, *Stocks*, &c.; second line, *blue Forget-me-not*; third line, *white Iberis*; fourth line, *blue Kaulfussia amelloides*; fifth line, *rose Viscaria oculata*; sixth line, *yellow Leptosiphon androsace*. On this side there is no seventh line. I must not forget to mention that the *Cytisus* in the centre is contributed by M. Buzel, of Paris, and that at each extremity of the diameter there is a handsome vase filled with *Scarlet Geraniums*.

As some of your readers will, no doubt, readily perceive, the distribution of colours is not faultless in theory; but such as it is, the effect produced in this case is very agreeable, and that is, perhaps, sufficient.

A much larger, and, perhaps, more really beautiful clump, of a somewhat oval form, is that belonging to M. Pare, nearly opposite the conservatory. Here the plants are larger, and though the colours are less varied they are more striking. In this instance, also, the ground is raised about eighteen inches at the circumference, and considerably more than that at the centre. The sloping border of grass is about three feet broad.

At the centre is a Fan Palm, nearly six feet high; and here, about seven feet of the ground is filled with the *Rose Souvenir de Malmaison*. Round that there is a line two feet wide of the *crimson Bengal* variety. The next line is composed of some whitish variety of *Cape Heaths*, about twelve inches wide; then there is a line of *blue Pansies*, of nearly the same width. In this clump, all the plants present an even and gradual sloping surface; but they are not, as in the preceding instance, placed close together; on the contrary, there is plenty of room for the fresh air to circulate about them.

The next clump of this kind worth notice has the centre filled with light-coloured varieties of *Rhododendron*, of moderate size. Round these is a line of *rose-coloured Geraniums*; then a line of *red Phloxes* at the grass border. This is a regularly oval form, having at one end a cross line of small *Scarlet Geraniums*, and at the other a similar patch of *Petunias*.

In another part of the ground MM. Tallard freres, have a pretty bed nearly in the same style as the preceding, being chiefly filled with annuals and other sorts, as *Calceolarias*, *Phloxes*, *Petunias*, and *Stocks*. Some pretty colours have

also been distributed round the large and elegant aviary placed near the stove at the west end of the ground. Here the first line is *white* (*Iberis*), the second *orange* (*Cheiranthus ochroleuca*), the third *rose* (*Stocks*), the fourth *white* (*Stocks*), the fifth *rose* (*Phlox*). In this case, the circumference is composed of a broad band of Ivy neatly trimmed. I suppose the person who takes care of the birds must get to the cage by means of some sort of moveable bridge, for the lines of flowers are not broken by anything in the form of a path. The Aviary, as might be expected, is an object of much interest, and is justly admired by everybody, not only for the rich and varied plumage of the birds, but also for the very elegant design of the structure. This valuable contribution is from M. Vailhant, near the Louvre.—P. F. KEIR.

We have had warm, and sometimes even very hot, weather for nearly three weeks; but a change is apparently at hand, for the sky has been more or less overcast during the last two days. Yesterday we had a smart, sudden clap of thunder, and there was a great deal of sheet lightning during the earlier part of the night. To-day we have been expecting abundance of rain, but as yet very little has fallen. Up to the present time, the reports from the country are cheering as to the crops; and it is particularly gratifying to know that *Potatoes* are better this year than they have been for some time.—K.

VINERY HEATED BY AN ARNOTT'S STOVE.

HAVING, in a former letter, given you some account of the working of an Arnott stove in my greenhouse, let us now, if you are not weary of me, proceed to the vinery.

My gardener, who professed thoroughly to understand the culture of Vines, had the border made to his own liking, and three Black Hambro's and two Muscats were planted. Year after year, we had plenty of long, thin wood, latterly at the top of the Vines; but Grapes there were none. Year after year passed. I began to read THE COTTAGE GARDENER. The border was drained, and renewed with drier material, but in vain. Growing weary of this system, I remonstrated, and at length took the management into my own hands. With THE COTTAGE GARDENER in one hand, and a sharp knife in the other, I commenced pruning my own Vines, simply following Mr. Errington's instructions. The wood still came thin, and I called in the assistance of an excellent gardener in the neighbourhood. He said nothing could be worse: the wood thin; no root action; leaves sickly; no promise of fruit; yet the border was good; and one thing surprised him, "how the Vines could be so well pruned." He prescribed hot stable-litter on the border; to cover the roof closely down with tarpauling; to keep the house very damp and warm; all to promote root-action as much as possible. The stove he thought bad; its heat too dry; the ventilation not good; he wished the top lights would open. Yet there was that "good pruning"—I determined to persevere.

Sleeping, one night, before this time, at Stirling, I awoke very early in the morning with a strong impression that *Polmaise* was not far off. My bed-room window looked into the stable-yard, and there I saw an ostler. "How far to Polmaise?" "Four miles." "Then get a gig ready to take me there." I arrived by six; was shown through the vine-ries: saw the system and splendid fruit of which you have heard so much; returned to Stirling in time to take some of my family that lovely drive to Loch Katrine with my own horse, and picked up a wrinkle, which I thus applied on my return home.

Opposite my stove, on the top of the wall of the tan-pit, three feet from the ground, stands a zinc trough six feet long, four inches wide, and four inches deep. Beneath this hangs a piece of carpet of the same length as the trough, three feet wide, and attached by strings at the lower corners to hooks on the opposite wall. From ten to twenty woollen threads dip into the trough, and, on the syphon principle, bring the water by drops to the top of the carpet, and there discharge themselves; thus keeping a damp surface in front of the stove, and constantly giving off that moist warmth which is congenial to the growth of Grapes. In very dry weather we add more threads; in wet weather, or when the

Vines are flowering, we take them all out. I remember the pleasure with which I saw these little rills first commence to flow; whilst the stove, warming a constantly evaporating surface of eighteen square feet, caused an imperceptible vapour to arise, in some degree resembling "the distilling as the dew, and as the small rain upon the tender herb." Whilst the constancy of the action reminds me of those lines supposed to be addressed to the Cottager by his Clock:

"For thee I labour day and night,
Labour for thee with all my might;
A new example take from me,
And serve thy God, as I serve thee."

We are, I believe, indebted to a Scotch judge for this simple contrivance, and the gardening world is not aware how much it owes him.

In the volumes that have been written about Polmaise, this principle has been too much lost sight of. Most gardeners, on seeing my trough and carpet, consider them a clumsy addition to a nasty Arnott stove. I attribute to them much of the luxuriance of my Vines, and the profusion of those crystal gems which every Vine-grower rejoices to see exuding from his young wood.

The tan-pit, in the middle of the house, acts in the same manner; but from the small space that we have (the house, as I mentioned, being eighteen feet by fifteen feet) we cannot afford to leave it unoccupied, as is generally recommended, and as is practised with great success by Mr. Nash, at Bishop Stortford. There I saw fourteen Black Hambro's in one house, and fourteen Muscats in another, all in full luxuriance, each Vine bearing its large bunch of Grapes, regularly from end to end, on alternate sides of the rafter, like a good Scotch Turnip field, which I tell our farmers, who are fast approaching to the same perfection, has every Turnip in its right place, and never two where there ought to be one. My tan-pit is at present occupied chiefly by Azaleas, which are perfecting their buds; a few little Orange-trees, which my daughters have grown and grafted with their own hands; some Begonias; a *Franciscea*; a *Stephanotus*, which my present gardener raised from seed, and which will, I hope, soon show whether it is a variety; and a *Gardenia radicans* now perfuming the house. Around it, and on shelves, stand an Oleander, the earlier plant being now in full flower, and enjoying a cooler atmosphere; an *Ipomea Learii*; a few Camellias; some Fuchsias of good sorts, perfecting their wood before flowering; and other plants that I cannot now enumerate. But I must tell you that two Scarlet Geraniums (*Brighton Scarlet* and *Huntsman*) are trained up the back-wall, planted in the earth.

Before I expected to have a garden of my own, I had admired Geraniums so trained at Dropmore, and determined, if I ever had a hothouse, to devote part of my back-wall to this purpose. They furnish us with their brilliant addition to the nosegay from one Christmas to the next. At present they are cut in, as the same flower so much abounds in the beds; but when in full bloom, they are a striking ornament to the back-wall. Having been at Dropmore three or four years ago, after an absence of some thirty years, I asked for their Geraniums, or whether they had given up growing them in that manner, as I could not find them. Mr. Frost, the very careful gardener, answered, that he had had an accident with his flues, and had lost them, but should soon renew them. I thought my Arnott stove had never played me that trick. A visit to Dropmore will well repay a Londoner. By the Great Western to Slough, where he can visit the nursery of that prince of flower gardeners of the present day, Mr. Turner, as famous for the variety of his show plants as for their excellence; then proceed to the grounds as Dropmore, which combine with beauty of situation some of the finest ornamental trees of their sorts that are to be found in England, especially the *Araucaria* and *Deodars*. The seed from which the latter are grown, and also the large plants at Chiswick, Kew, &c., were brought by my brother from the Himalayas, in 1831, by the route of the Cape of Good Hope. He kept the seed in his cabin in a tin case, and occasionally exposed it to the sun on a fine day. Thus was this noble tree first introduced into England. The Queen's admirable garden, at Frogmore, a credit to royalty and Mr. Ingram, might finish a very enjoyable day.

But to return to my Vines. After their being covered down both in the border and house, I was glad to find, at

pruning time, that there was more wood on which to operate, and that of a better quality. In the ensuing spring a few bunches began to appear. These ripened pretty well, and again the wood was stronger and better. Last year, the consulting gardener came to look at them. He was surprised at the progress that had been made, and the luxuriance of some young Vines that he had given me. He is one of those rare gardeners, who, when anything goes wrong, attributes the blame to himself; and to whom it is both a profit and a pleasure to give a good plant, or cutting; for he is sure to take care of it, and replace it if anything goes wrong with one's own.

We had, subsequently, some shanking, but the bunches of the Muscat were large, and brought to maturity. The Black Hambro's were of a fair size, and a good colour. This year, under my new gardener's care, they again look better: *shanking* has disappeared. He has kept up more heat, and given much less air than I did; and the summer, hitherto, has been much drier than last year. Before he came, we had a little stable-manure upon the border, not enough to create fermentation, but I thought that it would bring the roots of the vines a little nearer to the temperature of the house this very cold spring. These particulars are mentioned in case they should throw any light on the difficult subject of *shanking*.

I have measured the leading shoot of a young Vine at three feet from the old wood: its girth is one-and-a-half inches, and there are eight eyes in that length. The wood is round, and it is now turning brown. I hope that, by keeping the young Vines more cut back at first, we may make the lower part of the house more productive. I have trained a horizontal branch from one of the old Vines along the front, and this is bearing a few bunches. Next year I shall be better able to judge how far the want of heat in front can be overcome; or, perhaps, I may supply the house by carrying the flue of a neighbouring pit along the front wall.

Our large church is comfortably heated by a full-sized Walker's Stove, which is nearly on the same principle as Arnott's; and, let me mention, to Dr. Arnott's honour, that his invention was not protected by a patent, but was at once thrown open to the public as a free gift.

If these letters should show any of your readers how the great enjoyment of a Greenhouse can be obtained at a moderate certain cost, and with little trouble; or should they induce more experimental gardeners to explain how similar advantages can be obtained in an easier or simpler manner, it will afford much satisfaction to your obedient servant,—A. L. M., near Lincoln.

P.S.—It may be interesting to some of your readers to hear, that at the Lincoln Flower Show, held on the 18th of July, our Black Hambro' Grapes gained a prize, being only beaten by the gardener that I had consulted as to the management of my Vines.

ERRORS AT PAGE 243.—Third paragraph, "A sheet-iron pipe without *footing*," should be, without "*luting*." I supposed, from having seen it so used, that *luting* was the technical word for making the joints of a pipe quite tight. My pieces of pipe are only slipped over each other.

Same paragraph, "as the dust *from* containing the ashes," should be, "as the dust *pan* containing," &c.

The 1st Objection. "I think of *adopting*," should be, "*adapting*."

THE HOUSEHOLD.

UNDER this head we shall, from time to time, furnish our readers with information on such matters as may conduce to the comforts and pleasures of home; and as "home" is a word dear to every heart, a subject in which we have all a common interest, we shall be glad to be supplied with the experience of our friends, when they think that by doing so they can contribute something, however little, towards the pleasures of the homes of others. This being the season when Strawberries are in perfection, and generally plentiful, we have much pleasure in giving the following receipts for using that agreeable fruit.

STRAWBERRY JAM.—Select small, well-ripened and well-coloured fruit, and to each pound of fruit add three-quarters-of-a-pound of loaf-sugar bruised. Put them into a copper

skillet, or enamelled saucepan, and boil for half-an-hour, stirring all the time, and removing the scum as it rises. When it is completed, put it into jars and pots, which should be tied down tightly with bladder, or paper which has been brushed over with the white of an egg, to exclude the air.

PRESERVED STRAWBERRIES.—This, by some, is also called Strawberry Jam, and is distinguished from the preceding by the fruit being whole, and the syrup transparent. Take an equal weight of fruit and loaf-sugar which has been finely pounded. Lay the Strawberries on a dish, and sprinkle half the sugar over them; let them remain so all night, and next day make a thin syrup with the remainder of the sugar, and one pint of Currant juice to every three pounds of Strawberries, and let the whole simmer *gently* for one hour, removing the scum as it rises, and carefully stirring with a wooden spatula so as not to bruise the fruit. Put into jars, and tie down as for jam.

STRAWBERRY JELLY.—Put the Strawberries into a cloth, and press them so as to extract all the juice, to which add an equal weight of bruised loaf sugar. When the sugar is dissolved, put the whole into a skillet over a clear fire, and boil it for twenty minutes, stirring and removing the scum all the time.

STRAWBERRY JELLY IN SHAPES.—Bruise a quantity of fresh-gathered Strawberries in an earthenware pan, with a wooden spoon or spatula, to which add a little water, and sufficient pounded loaf-sugar to sweeten to the taste. In the course of one or two hours, strain through a jelly-bag, and to each quart of the juice add one ounce of isinglass which has been dissolved in half-a-pint of water, well-skimmed, strained, and cool. Mix the whole well together, and add sufficient lemon-juice to flavour it. Pour into shapes, and keep in a cool place or in ice till wanted.

STRAWBERRY CREAM.—To a pint of cream add six ounces of Strawberry Jam, and work them through a sieve, to which put the juice of one lemon, and whisk it rapidly at the edge of a dish. Lay the froth on a sieve, and add to the contents of the dish a little more lemon-juice, and when no more cream will rise, put the cream into another dish, or glasses, and place the froth upon it, well-drained; it is then ready for use.

STRAWBERRY CAKES.—Take a quart of fine flour, and rub into it half-a-pound of the best fresh butter till the whole is crumbled. Beat three eggs very light, and mix with them three tablespoonfuls of powdered loaf-sugar, and with this wet the flour and butter so as to form a dough, which, if too stiff, add to it a little cold water. Knead the dough till it leaves the hands freely, roll it out into a rather thick sheet, and then cut it into round cakes. Butter some large, square baking-pans, on which lay the cakes, and put them in a brisk oven till they are baked a light brown colour. Have ready a sufficient quantity of ripe Strawberries, mashed and made sweet with powdered sugar; but reserve some of the Strawberries whole. When the cakes are cool, split them in two, and on the under half spread thickly the mashed Strawberries, upon which press the upper half of the cake. Cover the top and sides of the cakes with some icing, so as completely to enclose the upper and lower halves. Before the icing is quite dry, ornament the top of each cake with the whole Strawberries which were reserved, placing a large one in the centre and smaller ones round it. These are delicious, and highly ornamental; and the Strawberries being uncooked retain all their natural flavour.

STRAWBERRY WATER-ICE.—Put ripe Strawberries into a linen bag, and squeeze out the juice, and to every pint of the juice put half-a-pound of pounded loaf-sugar. Mix well together, and put it into a freezer and freeze it. In this way ices may be made, without cream, of Currant or Raspberry juice.

STRAWBERRY MARCPANE.—Take two pounds of sweet almonds, two-pounds-and-a-half of sugar, and a pound of Strawberries. Beat the almonds to a fine paste, and mix them with the sugar, which has previously been boiled to the consistency of thin soup. Bruise and strain the juice from the fruit, which add to the almond paste and syrup. Stir the mixture well, set on hot ashes, and continue stirring till the paste is sufficiently done, which may be ascertained by laying a piece on the back of your hand, and if it may be removed without sticking it is enough. When cold, spread over a slab, and cut into shapes.

SUCCESSFUL BEE-KEEPING.

IF in these Cock and Hen days a little Bee information is admissible into the pages of *THE COTTAGE GARDENER*, I should wish Apianians to be informed that *all* my hives moved on the "Country Curate's" principle have swarmed twice this year. This is worth knowing, as in the last three years I have moved four or five hives *each year*, and, to my knowledge, *but one* of those hives swarmed twice.—FRANK GRANT.

DESTRUCTIVE BIRDS.

WE rejoice to learn, from several quarters, that our remonstrances for the destruction of predatory birds and vermin have met the views of many of our distant friends, and that several in our own neighbourhood are joining heart and hand in the cause, using every effort in their power for annihilating them before the coming harvest. Although no clubs are yet established for this purpose in our own immediate vicinity, yet, that small birds of a destructive character are already diminished, to a certain extent, is apparent from the fact of our seeds (their favourite dainties) not being attacked as in former seasons. Now is the time to persevere, as every pair of old birds killed now tells for ten in the autumn; and although the sad affair in the Crimea will scarcely admit of a joke, let us hope that sufficient powder and shot will be left at home to battle with the birds, and that it will be fraught with quicker results than the contingencies of the war. By shooting, and worrying them by other projects, those not killed will soon disperse off our premises, and migrate from us to different parts, or other homesteads, where they are not molested, and where they may be said to belong as much to them as ourselves; and where, if the proprietors choose to foster them they may, and decoy them if they please, and enjoy the fun of seeing them eat up their corn at their own expense. Our neighbours should bear in mind that flocks of their own pigeons are frequently seen feasting on other people's corn, where they are not at all welcomed. If we may be allowed to digress a little, and turn politicians, we would just say, "let us go on stimulating each other, by precept and example, like true patriots; and by the end of harvest a great saving will be accomplished favourable to our own interests and the nation's weal." We will just observe, by way of illustration, what probable saving may be effected to the country at large by such a course being energetically and fully carried out. Speaking within bounds, we will suppose *only* one peck of grain or seeds to be demolished on every acre in England and Wales alone, in one year, by destructive birds, rooks, and vermin. Parliamentary statistical reports for 1854 have been published, and it appears that the following numbers of acres under tillage for corn, in England and Wales (to say nothing of Ireland and Scotland) was, Wheat 3,807,846 acres; Barley 2,667,776; Oats 1,302,782; Rye 73,731, making a grand total of 7,852,135, say 8,000,000 acres, by including all kinds of seeds. It thus follows, that at this moderate computation one peck per acre only (and how often is there much more, nay, even one half consumed, or spoiled on small plots, and in cottager's gardens?) 2,000,000 bushels are actually destroyed by birds, &c., every year! No mean consideration this, surely, coupled with other sad wastes of corn, which we have alluded to in a former paragraph, in this a time of scarcity, and when war is inevitable!—HARDY AND SON, *Seed-growers, &c., Maldon, Essex.*

NEW PLANTS.

BLANDFORDIA FLAMMEA (*Flame-flowered Blandfordia*).

THIS greenhouse bulb is a native of Hunter's River district, in new South Wales, whence it was brought, in 1850, by Lord Walter Butler. It is about three feet high, and its campanulate flowers are scarlet tipped with yellow. (*Botanical Magazine*. t. 4819.)

TRICHODESMA ZEYLANICUM (*Ceylon Trichodesma*).

Although found in tropical India, as indicated by its specific name, yet it is found also in the warmest districts of

Australia, as well as in Madagascar, Abyssinia, and French Guiana. Sir W. Hooker says, "We have only reared a few plants in pots in a warm greenhouse, comparatively of small size; and, if they ripen seed, we shall try them in the open air, where they would flourish, probably, in summer, and greatly improve in the size of the flowers as well as of stem and foliage." It belongs to the Natural Order of Borage-worts (*Boraginæ*) and to Pentandria Monogynia of Linnæus. It has "numerous branches terminating in panicles of bright blue, Borage-like flowers." (*Ibid.* t. 4820).

EPIPOGON GMELINI (*Gmelin's Epipogon*).

This is a hardy ground Orchid. Even upon the continent of Europe, Dr. Fred. Nees calls this "planta rarissima;" and it is singularly gratifying to us, that the first figure of it published in this country should be from a specimen, an undoubted native of England. It was discovered on the 9th of September of this year (1854), as related in the "Journal of Botany" for October, by Mrs. Anderton Smith, the lady of the Rev. Anderton Smith, at Tedstone Dalamere, Herefordshire. "All the specimens were found at the foot of a very steep woody bank, close to a brook; the soil very wet and stiff." That it has remained so long undiscovered in this country, and that it is still considered so rare on the Continent, is due to the fact of its having no foliage and no conspicuous colours to attract attention; or it may have been passed by for some of our other colourless and aphyllous plants. Once known to be a native of Britain, other stations may be expected to be soon detected. Various localities are given in the middle and north of Europe, from Switzerland, Austria, the Caucasian Provinces, to Sweden, and westward as far as Lake Baikal, and the River Irkut, Province of Tunka. It was first known as a Siberian plant, admirably described and figured by Gmelin (*l. c.*) under the name of "*Epipogon*," a little more than a century ago. Linnæus referred the plant to *Limodorum*, and called the species *Epipogium*,—quoting the synonym of Gmelin also incorrectly as *Epipogium*. This spelling of the word has by authors been adopted, till Richard, in his 'Annotations,' as quoted by Lindley, named the plant "*Epipogon Gmelini*." At length Ledebour gave the generic name the usual termination, "*Epipogon*;" but he refers to authors whom I have not the means of consulting "Patze, Meyer et Elkan Flora d. Provinz Preussen, p. 93," in justification of the change. I have adopted the same as the most correct, and quite in accordance with that of the original author. It is observed by M. Schlauter, in Fred. Nees' 'Flora Europæa,' that the plant does not appear annually in the same spot, but every two years: the swollen branches of the root eventually becoming new flower-stems, and requiring two years to be perfected. (*Ibid.* t. 4821.)

QUERIES AND ANSWERS.

GARDENING.

GREEN CENTRE IN ROSES.—CLOVER AND ITS ENEMIES.

"What ails the enclosed *Rose*? There are about 200 blooms on the bush in the same state. A *Rose* in the greenhouse, this spring, had every bloom in just the same state.

"What is the enclosed *Wild Clover*? It is white. I found one plant of it in an upland old pasture.—W."

"Is it true that *Clover* is used for dying; and has it any insect enemy besides the Fly and Turnip Beetle?—AGRICOLA."

[Your *Rose* is deformed by the "Green centre," a malformation we noticed last week. We doubt very much if *Roses* grown on their own roots are subject to it. If any of our readers can give us information on this subject we shall be much obliged by their doing so.

The *White Clover* is only a variety of the Common Red Clover (*Trifolium pratense*); both this white variety and a cream-coloured one are mentioned by Withering in his "Arrangement of British Plants."

* "*Epipogon dixi*, quia barba (by which he means the labellum) hujus floris inverso ordine disposita est." *Gmel.*

It is quite true that *Clover* is a *dye plant*. In Sweden its flower-heads are used to produce a green colour on woollens. With alum they give a light green to the wool, and with copperas a dark green. Besides its young leaves being liable to the ravages of the Turnip Beetle (*Haltica*), its seeds are preyed upon by a small Weevil *Apion flavifemoratum*].

SHRUBS AND FERNS FOR SHADED GARDEN.

"X. Y. Z. would be glad of an answer to the following queries:—

"He has a part of his garden with an east aspect, very much shaded with trees, all deciduous, such as Horse-Chesnuts, &c., which render the ground under them very bare; in fact, nothing grows there. He has thought of one or other of the following plans: either to trench the soil and plant laurels, or any other plants you may suggest. What plants of this kind will do? Or, to make a rock-work for such *Hardy Ferns* as like the shade. Will they stand the drip of trees? There are plenty of large stones in the neighbourhood. Or, to raise on the surface of the soil a mound of peat earth, kept up in its place by rough stones covered with Ferns, and plant *Rhododendrons*. Will they stand the "drip?" In the first case, the fresh soil would soon be monopolised by the large trees. Are there any of the *Vinca* tribe that are suitable? Would *Hollies* grow there? Is water boiled in a copper boiler injurious either to the roots or leaves of plants?"

[In addition to *Laurels* under your trees, you may plant *Tree Box*, *Dwarf Box*, *Evergreen Berberry*, and *Holly*.

Hardy Ferns would also succeed under the trees, planted as you propose, and so would *Rhododendrons*, and all the varieties of the *Periwinkle*, or *Vinca*.

Water boiled in a *clean* copper boiler is not injurious to plants, whether applied to the roots or to the leaves.]

LONDON MARKETS.—JULY 23RD.

DURING the past week the arrival of home-grown Fruit has been very abundant, particularly of Cherries, of which there is a large supply of *Black Hearts* and *Kentish*; the former are now being hawked about the streets at 2d. per pound. Strawberries are on the wane, and in the course of this week the *Queen's* and *Keens' Seedlings* will be over; but there is still a supply of the *Elton*, which will last for a little while longer. West India Pines continue to arrive in large quantities, and excellent fruit may be bought at from 1s. 6d. to 2s. 6d. each. We also observed several parcels of Pears from Oporto, which, we have no doubt, are the *Windsor*, but we could not ascertain the name under which they had been imported. Grapes are also plentiful, and of excellent quality; as are also Peaches, Nectarines, and imported Apricots. Flowers are very abundant, and consist of *Roses*, *Pinks*, *Carnations*, *Heliotropes*, *Fuchsias*, *Heaths*, *Mignonette*, and *Stocks*.

COVENT GARDEN.

FRUIT.			
Apples, kitchen,		Lemons, doz...	1s. to 1s. 6d.
per bushel	— to —	Almonds, per lb..	2s. „ —
„ dessert, doz. —	„ —	Nuts, Filberts, lb. —	„ —
Pears.....	„ —	„ Cobs, lb. ..	„ —
Apricots, per doz.	2s. „ 2s. 6d.	„ Barcelona,	
Peaches, per doz.	12s. „ 15s.	per bushel....	20s. „ 22s.
Nectarines, doz.	12s. „ 15s.	„ Brazil, per	
Cherries, lb.	4d. „ 1s.	bushel	12s. „ 14s.
Plums	„ —	Chestnuts	„ —
Pine-apples, lb...	3s. „ 6s.	VEGETABLES.	
Grapes, lb.	3s. „ 6s.	Cabbages, per doz.	9d. to 1s.
Melons, each....	2s. „ 6s.	„ Red, per doz.	2s. „ 4s.
Figs	„ —	Cauliflowers, doz.	2s. „ 3s.
Gooseberries, per		Brocoli	„ —
quart	2d. „ 4d.	Savoy's	„ —
Currants	4d. „ 6d.	Greens	„ —
Raspberries	„ —	Spinach, per sieve	1s. „ 2s.
Strawberries, per		Peas, per half sieve	
pottle	2d. „ 6d.	1s. 6d. „ 2s. 6d.	
Oranges, per 100	4s. „ 10s.	Beans.....	„ —

COVENT GARDEN — Continued.

French Beans, per 100..... 9d. „ 1s.	Water Cresses, per doz. bunches.. 6d. „ 9d.
Scarlet Runners — „ —	Small Salad, per punnet 2d. „ 3d.
Carrots, bunch .. 6d. „ 9d.	Asparagus, per bundle.... 1s. 6d. „ 4s.
Parsnips — „ —	Sea-kale, per pun. — „ —
Beet, per doz. 1s. „ 1s. 6d.	Rhubarb, per bdle. 2d. „ 6d.
Potatoes, new, cwt. 10s. „ 20s.	Cucumbers, each 3d. „ 1s.
Turnips, bunch .. 2d. „ 6d.	Vegetable Marrow 2d. „ 3d.
Onions, young, bunch..... 1d. „ 2d.	Tomatoes — „ —
Leeks, per bunch 2d. „ 3d.	Mushrooms, per pottle 8d. „ 1s.
Garlic, per lb. .. 6d. „ 8d.	
Shallots, per lb. 4d. „ 6d.	
Horseradish, per bundle.. 1s. 6d. to 2s. 6d.	HERBS.
Lettuce, Cos, per score 6d. „ 1s.	Basil, per bunch 6d. to 9d.
„ Cabbage 6d. „ 8d.	Marjoram, per bunch 6d. „ 9d.
Endive, per score 1s. „ 1s. 6d.	Fennel, per bunch 2d. „ 3d.
Celery, per bun. 8d. „ 1s.	Savory, per bunch 2d. to 3d.
Radishes, per doz. bunches 1s. „ 2s.	Thyme, per bunch 2d. „ 3d.
	Parsley, per bunch 2d. „ 3d.
	Mint, per bunch 4d. „ 6d.

POTATOES.

Regent's, York, per ton 160s. to 195s.	Regent's, Scotch, per ton 125s. to 150s.
„ Kent and Essex 140s. „ 180s.	Scotch Reds.. 120s. „ 140s.
„ Lincoln 120s. „ 180s.	„ Blues 95s. „ 130s.

GRAIN AND SEED.

WHEAT.		PEAS.	
Kent and Essex, red, per qr. .. 73s. to 80s.		Boiling, per qr. 38s. to 44s.	
Ditto, white.... 75s. „ 86s.		Common 36s. „ 38s.	
Norfolk and Suf- folk 70s. „ 80s.		Grey 34s. „ 38s.	
Dantzic 84s. „ 90s.		Maple 38s. „ 40s.	
Rostock 80s. „ 90s.		SEEDS.	
Odessa 70s. „ 78s.		Turnip, White, per bush. — to —	
American..... 82s. „ 86s.		Swede — „ —	
BARLEY.		Rape 82s. „ 84s.	
Malting 36s. to 38s.		Linseed, sowing 74s. „ 76s.	
Grinding and Distilling.... 31s. „ 33s.		„ crushing 63s. „ 66s.	
Chevalier..... 34s. „ 36s.		Clover, English, red..... 60s. „ 68s.	
OATS.		„ Foreign do. 52s. „ 57s.	
Scotch, feed .. 31s. to 35s.		„ White 68s. „ 73s.	
English 27s. „ 31s.		Trefoil 28s. „ 32s.	
Irish 26s. „ 29s.		Rye 40s. „ 43s.	
Dutch Broo .. 30s. „ 31s.		Tares — „ —	
Danish 28s. „ 30s.		Canary 50s. „ 54s.	
Russian 29s. „ 31s.		Hemp 50s. „ 53s.	
BEANS.		Linseed Cake, per ton £11 to £12	
Harrow 41s. to 43s.		Rape Cake £6 10s. „ £6 15s.	
Pigeon 42s. „ 44s.		Indian Corn .. 47s. „ 50s.	
Tick..... 40s. „ 42s.			

HOPS.

Mid & E. Kent £14 to £18	Weald of Kent £10 10s. to £11 10s.
Sussex.... £10 to £10 10s.	

HAY AND STRAW.

Clover, 1st cut per load 100s. to 147s.	Meadow Hay, new 95s. to 105s.
Ditto, 2nd cut 90s. „ 130s.	Rowan — „ —
Meadow Hay .. 90s. „ 135s.	Straw, flail 30s. „ 36s.
	Ditto, machine 28s. „ 32s.

MEAT.

Beef, inferior, per 8 lbs. 3s. 4d.	Mutton, mid. 4s.
Do. mid. 4s.	Do. prime 4s. 10d.
Do. prime..... 4s. 6d.	Veal 4s. to 4s. 8d.
Mutton, in- ferior..... 3s. 4d.	Lamb 5s. 4d. to 5s. 8d.
	Pork, large 3s. 6d. to 4s. 0d.
	Ditto, small 4s. 0d. to 4s. 8d.

POULTRY.

Goslings 5s. to 6s. 6d.	Ducklings 2s. 0d. to 3s. 0d.
Fowls 3s. „ 4s.	Pigeons .. 0s. 6d. „ 0s. 8d.
Capons.. 3s. 6d. „ 4s. 6d.	Rabbits .. 1s. 0d. „ 1s. 6d.
Chicken .. 2s. 0d. „ 3s. 0d.	

PROVISIONS.

BUTTER.—Cwt.	CHEESE.—Cwt.
Dorset, fine .. 98s. to 102s.	Cheshire, fine .. 70s. to 80s.
Do. middling .. 80s. „ 86s.	Gloucestershire, double 68s. „ 74s.
Fresh, per doz. lbs. 8s. „ 12s.	Ditto, single.... 56s. „ 70s.
Friesland 88s. „ 92s.	Somerset 68s. „ 80s.
Kiel 90s. „ 94s.	Wilts, loaf 63s. „ 74s.
Carlow 94s. „ 100s.	Ditto, double .. 60s. „ 68s.
Waterford 88s. „ 94s.	Ditto, thin 54s. „ 64s.
Cork 84s. „ 98s.	Ditto, pines 72s. „ —
Limerick 86s. „ 98s.	Berkeley, thin .. 62s. „ 66s.
Sligo — „ —	
BACON.—Cwt.	
Wiltshire, dried 78s. to 80s.	York, new 78s. to 90s.
Waterford 70s. „ 74s.	Westmoreland.. 76s. „ 86s.
	Irish..... 70s. „ 80s.
HAMS.—Cwt.	
	York, new 78s. to 90s.
	Westmoreland.. 76s. „ 86s.
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WOOL.

Down Tegs 1s. ½d. to 1s. 1½d.	Kent Fleeces 1s. ½d. „ 1s. 1½d.
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TO CORRESPONDENTS.

BACK NUMBERS.—Sixpence each will be given for clean copies of Nos. 1, 3, 5, 6, and 66, of THE COTTAGE GARDENER, delivered free at the Office, 20, Paternoster Row.—Full price, also, will be given for Volumes I and III.

VARIEGATED PLANTS (G. S. W.).—We hope to say something about them next week.

INSECT ON CUCUMBERS (An Old Subscriber).—The insect is the *Thrips*. You will find all we know about it if you look to the Index of any former volume. You probably keep the air under your glass too dry.

KEW GARDENS (Annie).—No order for admission is required. They are open to the public daily, and we know of no place near London so enjoyable as the Gardens and their Museum.

BORDER-EDGING (Idem).—If expense is not objected to in the first instance, cast-iron is the best and most durable. It may be obtained cast of a neat pattern. *Guano* is a very good manure for Stocks. We know of no work devoted to forming *garden-beds*; but we purpose, ere long, to remedy the want in our pages.

STRAWBERRIES (W. Roden).—Mr. Myatt, nurseryman, Deptford, Kent, will give you all the information you require.

FRUITS FOR LANCASHIRE (A Lancashire Farmer).—**DESSERT APPLES:** *Kerry Pippin*, *Court of Wick*, *Scarlet Nonpareil*, *Ostin*, *Brad-dick's Nonpareil*, *Sam Young*, *Wormsley Pippin*, *Margil*.—**DESSERT PEARS:** *Beurre de Capiaumont*, *Beurre d'Arenberg*, *Beurre d'Amant*, *Louise Bonne de Jersey*, *Knight's Monarch*, *Beurre diel*, *Jargonelle*.—**PLUMS:** *Winesour*, *Drap d'Or*, *Magnum Bonum*, *Orleans*, *Green Gage* (wall), *Purple Gage* (wall), *Coe's late Red* (wall), *Prune Damson*.—**STRAWBERRIES:** *Keens' Seedling*, *British Queen*, *Comte de Paris*, *Hooper's Seedling*, *Elton*.

ORDER NOT EXECUTED (M. Keeshfolk).—We believe the person at Turnham Green to be a highly respectable man, and think there must be some oversight or neglect on his part. Write to him again, and if you get no reply we shall aid you.

NAMES OF PLANTS (Totness).—1. *Escallonia rubra*; 2. *Deutzia scabra*; 3. *Myrica Gale*; 4. Too damaged to be known; 5. *Veronica salicifolia*; 6. *Fabiana imbricata*; 7. *Leycesteria formosa*.—(Clericus). One is *Weigelia rosea*, a beautiful hardy shrub; the blue flower is one of the Borageworts, and a species of *Anchusa*; but we cannot for certain name what species from such a bit.—(An Old Subscriber). The *Gladiolus* flower sent is a beautiful variety, of course an English hybrid, and something in the way of the variety called *Prince Albert*. The other imperfect specimen we take to be *Anomatheca cruenta*, and not an *Ixia*.

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WEEKLY CALENDAR.

D M	D W	JULY 31—AUGUST 6, 1855.	WEATHER NEAR LONDON IN 1853.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in Inches.						
31	Tu	Chalk-hill Blue Butterfly.	29.803—29.654	76—59	S.W.	36	23 a 4	49 a 7	9 27	17	6 6	212
1	W	Silvanus frumentarius.	29.697—29.658	69—46	S.W.	24	25	47	9 42	18	6 3	213
2	Th	Cassida maculata.	29.783—29.684	73—56	N.W.	40	26	46	9 56	19	6 0	214
3	F	Cassida nebulosa.	29.854—29.805	58—46	N.E.	27	28	44	10 10	20	5 56	215
4	S	Triplax russica.	29.929—29.916	57—52	N.	39	29	43	10 27	21	5 51	216
5	SUN	9 SUNDAY AFTER TRINITY.	30.038—29.974	59—54	N.	04	31	41	10 47	22	5 45	217
6	M	PR. ALFRED B. 1844.	30.110—30.060	67—49	N.E.	—	32	39	11 12	23	5 40	218

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 74.3°, and 52.1°, respectively. The greatest heat, 92°, occurred on the 25th, in 1844; and the lowest cold, 36°, on the 6th, in 1833. During the period 104 days were fine, and on 92 rain fell.



ASPLE'NIUM FONTA'NUM.

THIS bears the English names of the *Rock Polypody*, *Slender-stemmed Polypody*, and *Smooth Rock Spleenwort*. Why the specific name *fontanum* was ever applied to it we cannot discover, and such specific name is singularly inappropriate, since so far from delighting in *fountains*, it is found only on dry rocks and old walls. The *root* is dark-coloured, short, and thick, furnished with many rootlets, and terminating in a scaly tuft, from among which arise the *fronds*. These fronds vary in height from three to eight inches, but rarely exceed four inches. They grow in an erect tuft, as represented in our drawing. A very small portion of the stem, or stipe, is without leaflets, and the scales of the root are continued up a part of that unleafleted portion. All the leafleted part of the stem has a narrow wing of a leafy texture running up opposite sides, between the stalks of the leaflets. The *leaflets* are pale green, alternate, and lengthened egg-shaped, some being divided into

leaflets similarly shaped, but others near the top of the stem are only deeply notched. The *fructification*, or sori, is very accurately described by Mr. Moore as being produced two or three (sometimes five, as in our magnified specimen) on a leaflet, on the side veins, and near where they join the mid-vein. The sori, he adds, are short, oblong, sometimes distinct, but often running together (confluent), and, occasionally, occupying nearly the whole under surface of every leaflet. "They are covered by an opaque, white, oblong skin (indusium), more rounded on the loose edge, which is turned towards the midvein, than on that edge by which it is attached to the leaflet; the loose edge being, also, waved and rather toothed." — (*Moore's Handbook of British Ferns*. 150.) Many botanists have doubted the claim of this Fern to be considered a British species, but we think its claim as fully established. That it has been found but

seldom, and in few places, is no counter-evidence. It is often passed by, probably, without examination, being mistaken for *Asplenium trichomanes*, and other common species.

The first to announce this as a British Fern was Mr. Hudson, in the first edition of his *Flora Anglica*, published during the year 1762. He states that it grew upon "rocky places near Wybourn, in Westmoreland." Mr. Bolton, in his *Filices Britannicæ, or History of British Proper Ferns*, published in 1786, states that this Fern was found on the walls of Agmondesham (Amersham) Church, in Buckinghamshire. In 1838, Mr. Readhead found it on rocks in Wharnccliffe Woods, Yorkshire. Mr. Charles Johnson discovered it, in 1845, on an old wall on Tooting Common, Surrey. More recently it has been found by the Rev. W. Hawker, on a wall at Ashford, near Petersfield, in Hampshire. Mr. Shepherd, of Liverpool, sent specimens to Mr. Moore, which had been collected at Matlock, in Derbyshire. Mr. Hutcheson, formerly gardener at Boxley Abbey, Kent, and a Fern cultivator, gathered it in 1842, on rocks near Stonehaven, in Kincardineshire. Thus, it has been found by competent judges in various parts of England, in Ireland, and in Scotland, and it would be worse than irrational to maintain that in all these places it had been accidentally introduced by spores brought from continental Europe.

The rarity of this Fern is in a considerable degree accounted for by the fact of its being unable to sustain our climate, except in sheltered, and thoroughly suitable situations.

To grow it in perfection, and to preserve it ever-green, it must be cultivated as a pot plant, and have glass protection the whole year, with shading from the scorching sun's rays during the summer months. It may stand in a pan to receive water, when required, but, in general, it should be sparingly watered, compared with the generality of Ferns, and yet never allowed to go dry.

Like most of the family, it is readily increased by careful division of large or old plants, in open weather during the spring months, and being planted in a mixture of sandy peat and broken bricks, or old mortar, or both. A little of this mixed with the soil is found beneficial to the plants, and particular attention is required to have good drainage. This drainage is best formed of fresh broken bricks. The roots of all Ferns seem to delight in finding their roots among this material. The pots should, in all cases, for this particular kind, be better than one-third filled with drainage, then a little moss over the drainage to prevent the earth going down among the broken bricks. When the drainage is thus all right, the plants may be watered more freely and safely. When shifting these plants into larger pots the drainage should be as before directed, and the crowns of the plants should be kept considerably higher than the rim of the pots. This is an essential point.

One of the greatest points in the culture and keeping these scarce and choice Ferns, is carefully to give them

water, and to shade them when needed, and not to disturb them so long as they are doing well. The outside of the pots the specimens stand in should be occasionally washed nicely, as well as the pans which the pots stand in.

Ferns, like other plants, occasionally become infested with Aphides, to destroy which they should be fumigated with tobacco-smoke.

When specimens are seeming to tire of their soil, or are become too large, then is the best time for division, or to make a number of plants out of one scarce one, for not till then would we divide a fine specimen of such plants.

THE July Meeting of the *Entomological Society* was held on the 2nd inst., the President occupying the chair. In addition to the donations of their Proceedings, by the Royal Society, and the Society of Arts, and various Entomological publications, a valuable donation was received from R. H. Meade, Esq., F.R.C. of Surgeons, being a collection of ninety-four British species of *Spiders* (in addition to sixty species previously presented), together with thirteen species of *Harvest Spiders*, of which group an excellent monograph has just been published by Mr. Meade. These specimens were preserved in a saline solution of sulphate of magnesia, with a slight addition of diluted sulphuric acid, being a preferable method of preserving these objects than that usually adopted of immersing them in spirits of wine.

Mr. Foxcroft sent for exhibition a number of rare species of various orders, which he had collected in Perthshire, for distribution among the subscribers to his excursion, accompanied by notes of a species which, in the larva state, resides in Ants nests, and which, from Mr. Foxcroft's observations, appears to be the cased Caterpillar of a small species of *Tinea*.

Mr. Westwood exhibited a number of specimens of the minute larvæ of *Meloe proscarabæus*, which he had received from one of the correspondents of THE COTTAGE GARDENER, and which were described as having been found congregated in masses of the size of a pea, at the tips of leaves of Potatoes; in their later state they are parasitic in the nests of wild bees.

Mr. Samuel Stevens exhibited a new and very remarkable longicorn Beetle, recently brought from the Feejee Islands, by Mr. MacGillivray, and to which Mr. A. White had given the name of *Psalidicoptus scaber*.

Mr. F. Smith exhibited specimens of the very rare British species of Ant, *Tapenoma erraticum*, of which several colonies had been discovered by Mr. F. Grant, near London.

Mr. Arthur Adams exhibited the equally rare Beetle, *Drypta emarginata*, taken recently near Portsmouth.

Mr. Stainton exhibited a remarkable collection of drawings of the transformations of minute Lepidoptera, made by a Prussian amateur, and which had been placed in his hands during his recent visit to Berlin.

Some of the species were of great interest, from the peculiarity of their transformations.

Mr. Hunter exhibited the female *Lobster Moth*, which he had recently taken, together with a number of young Caterpillars, reared from eggs which she had deposited in captivity. Unfortunately these Caterpillars exhibited a very cannibal appetite, killing one another without mercy.

Mr. Jansen presented to the Society's collection a specimen of the rare *Hypulus quercinus*, taken near Colney Hatch.

Mr. Curtis stated the circumstances connected with the capture of the blind Beetles, *Anommatus* and *Langelandia*, at Paris, by M. De la Rousée, at a depth of three feet below the surface of the ground; it appeared, however, that they had been found beneath a decayed water-butt, which had been sunk into the earth to that depth; thus giving English collectors a hint to the possibility of meeting with rare Coleoptera in similar situations.

Mr. Curtis likewise stated, that he had been informed by Dr. Asa Fitch, that at the present time the wheat crops in North America were attacked to a very great extent by the Hessian Fly, *Cecidomyia destructor*, and which Dr. Fitch considered was owing to the accidental destruction and absence of the parasites which ordinarily keep the Hessian Fly in check, suggesting the advisability, if possible, of importing some of these parasites into America. Mr. Westwood, however, considered that a far more practicable result would be obtained by the employment of the Wheat Midge sieves, invented by Professor Henslow, and which had proved so serviceable in checking the ravages of the English Wheat Midge, *Cecidomyia Tritici*.

Mr. F. Smith communicated a notice from Mr. Bates, relative to the bird-killing habits of a Brazilian species of Spider, belonging to the genus *Mygale*, which resides in crevices in the trunks of trees. Mr. Bates's observations thus confirmed the statement of Mad. Merian, which had been opposed by Mr. MacLeay. Mr. Meade stated, that according to Mr. Blackwall, the bite of the Spider was not accompanied by the introduction of a poisonous secretion into the wound, but Mr. Edwin Sheppard stated that he had observed that Toads are occasionally destroyed by a large red species of Spider, when shut up together.

Mr. Newman read a description of the habits and transformations of the striped Weevil, *Otiorhynchus sulcatus*, which is one of the greatest of horticultural pests, and which Mr. Newman had found to be very injurious in collections of growing Ferns.

Captain Cox stated, that at the present time the Lime-trees in the Parks of London swarmed with the pretty little *Tinea Linneella*, the larvæ of which reside beneath the bark of that tree, committing much injury. The Oaks, too, in Hyde Park, were also much infested with the *Ageria cynipiformis*, which had already killed many of the trees after they had been reduced to Pollards. An application to the proper authorities by the Entomological Society, appeared to be one of the

legitimate objects of the Society's proceedings; the President, however, feared that such an application would, at the present time, and with the recent dismissal of Mr. Kennedy from office, be certain to meet with no success or attention.

THINNING FRUITS.

THIS is one of the most important prunings as to fruit culture, and would appear to be particularly requisite with some kinds this season. Many serious consequences arise from over-cropping, amongst the chief of which may be named the following:—

1st. The fruit is neither so fine nor so highly-flavoured.

2nd. It seldom possesses the requisite keeping properties.

3rd. The powers of the trees bearing in the succeeding year are much weakened.

4th. In many cases the very constitution of the tree is seriously injured.

5th. It has a tendency in trained trees on walls to destroy whole branches, and thereby render them unsightly.

If these points are correct, it is obvious that the effects to be anticipated are no trivial affair. That the fruit is neither so fine nor so highly-flavoured the most ordinary observer must know; size is sure to suffer, and equally certain is it that quality suffers in almost equal ratio: but we may observe, that the very appearance undergoes a depreciation. Thus, in *Grapes*, a Black Hambro' may become a Red Hambro'; in *Peaches*, the rubicund Royal George may be little better than the old Early Anne. In *Pears*, the noble-looking Beurré Diel, with its bronzy-looking cheek, and weighing a pound, may be brought to appear like some half-sized, coarse, and insipid stewing Pear.

As to keeping properties, there is no doubt that they, too, are intimately influenced by due thinning. In *Grapes* this is most notorious to every good gardener: and we may here inquire which are the best *Peaches* gathered from any given tree—those which ripen prematurely, or those remaining two or three weeks afterwards? But in the keeping, or winter fruits, perhaps, the depreciation in flavour is even more manifest still; for we can generally better afford to have a few rapid *Peaches* than tasteless and gritty *Pears*. *Apples*, at least of certain kinds, show a marked difference on the shelves in mid-winter, as regards the same kind gathered from a healthy and moderate-cropped tree, and *vice versa*. I have known the Manks Codling, under circumstances of heavy cropping, become a mass of rottenness a month and more before those from moderately-cropped trees.

We come now to our third point;—the injury as to bearing in the ensuing year. This must be well known to many of the readers of THE COTTAGE GARDENER; for nothing is more common than to hear of *Apples* which bear in alternate years; to say nothing of other fruits.

I have affirmed that the very constitution of the tree is injured in many cases; and this surely needs little explanation. Who has not seen broken-down trees through over-bearing; trees of all kinds liable to this over-fruitful habit?

The last point I have urged is the tendency of over-bearing to render incomplete the appearance of trained trees in kitchen-gardens, where not only utility, but, I may add, systematic effect is desirable. I do not, however, affirm that all cases of diseased limbs, naked branches, &c., are caused by such means alone. We well know that insects, bad soils, and, indeed, neglect and mismanagement, may produce similar effects: but

this may fairly be asserted, that blanks and defects are thus created; for I have myself known hundreds of oases during the last forty years; albeit, we hear such awful complaints occasionally of failures in crops. The fact as to this is, that fruit crops out-doors, ever were, and ever will be, fitful in character, until the whole gardening world in Britain is covered with glass; and even then, I am not well assured but that there may be a rock a-head for which our navigating system is scarcely prepared.

About thinning-out fruits, it may be expected that I at once can show forth some system or maxim which will go far towards settling the practice; but this is not so easy as some might off-hand imagine. It is very easy, certainly, to assume that kind of positiveness which may allure for awhile, but we COTTAGE GARDENERS endeavour to shoot more correctly. Still, it is possible to give something like a rule to steer by.

Of course, our readers know that, as in other matters, much, very much depends on the age, constitution, kind, and character of the tree; and not only this, but the character and constitution of the soil the tree is growing in. If, however, we must speak in round numbers, let us say, that no two *Apples* should touch if we could help it. *Pears* of superior and keeping kinds should by no means be in bunches—a character they are apt to assume under fortunate circumstances; but a tree on a wall would be pretty well equipped by being furnished with fruit at six inches apart. This is not what is called a heavy crop, but we must not always care for terms: let us try for a crop of really good fruit. *Peaches*, to be of superior size and quality, should not be nearer together than seven inches; *Nectarines*, the same; *Apricots*, the larger kinds, may be allowed about five inches, but smaller kinds, or those for preserving, may be nearly double that thickness. *Plums*, such as the *Greengage*, may almost touch, or, indeed, they frequently come very fine in bunches; it is scarcely possible to offer any rule for them; and the same may be said of *Cherries*.

Above all, it is useless crowding fruit-trees with very full crops if they are scant of foliage, or the latter is much injured by insects. The character and amount of the foliage should, therefore, be taken into consideration. Let me recommend our readers to cast another glance over their fruit-trees, especially the more choice kinds. *Apricots* may be too far advanced, but much may be done for *Apples*, *Pears*, and even *Peaches*. And where crops are full, and it is not deemed expedient to remove any, let our friends remember the immense benefits arising from the application of liquid-manure: too little is done in this way.

R. ERRINGTON.

ALEXANDER CROSSE, Esq., died, recently, at his residence, near Bridgewater, aged more than seventy. This gentleman has long been a great favourite of scientific research, and will be remembered for the commotion he made by claiming to be a modern Prometheus, having, as he believed, created an insect by the aid of Galvanism! The insect was an *Acarus*, or Mite, and has since been proved to have been hatched from an egg deposited on the mineral submitted to the galvanic action.

SEASONABLE HINTS FOR THE FLOWER-GARDEN.

I MUST show the white feather, to-day, for the first time in the experience of THE COTTAGE GARDENER. Last week I promised to give some detailed accounts of the different kinds of variegated, and of the fine-leaved

plants, which have become so popular at our London exhibitions; but on turning to the usual sources of such information, I discovered that the trade names of these plants are in a worse condition than even a few would believe; and that continental gardeners, having had the start of us in the introduction and cultivation of such plants, think it now a fair game, or at least, act in a way which points to no other conclusion, to gull and cheat the English with high-sounding names, for which there is no authority whatever. I could mention, by name, five respectable firms in London who encourage all this absurdity (to call it by no harder name)—who buy every plant which “comes out” on the continent, and send them all over the kingdom under the most preposterous names that ever entered the head of a sane mortal, without taking the slightest trouble to ascertain if such names are right or wrong. The ill-practice is catching, too—“Our own people” assume the professor’s chair, and out of dog-Latin and bad French manufacture, to order, on the foreign model, without a blush or scruple; therefore, to attempt to bear a small share of common sense on this mass of absurdity is just that in which I failed this last week; but I am not foiled, and I shall return to the subject when the weather is colder, and there is less to do out-of-doors. Meantime, we must begin to propagate and arrange for the flower-gardens of 1856, and succeeding years.

GERANIUM CUTTINGS.

The first Geranium cuttings should be from the *Flower of the Day*, *Mountain of Light*, and *Silver King*. These three are all but one in the leaf, looks, and constitution; they are slow growers, and take a long while to establish themselves from cuttings. Early in March is the best time to propagate them, and the *Golden Chain*, *Dandy*, and most other variegated bedders, except *Mangles*; but thousands have not the convenience to force their plants in February for March cuttings, and all such ought to get in their stock of cuttings early in August, in order that the stock may be firm and well-established before the winter sets in. I would on no account put in cuttings of delicate Geraniums like these behind a wall after the 20th of July, at the latest. I see no good in doing so; it encourages laziness, to begin with, for behind a wall they require less attention; but they will acquire a certain degree of debility by their absence from the direct rays of the sun, which will render them more liable to mishaps in winter, so that nothing is gained, in the long run, by stifling cuttings out of the sun at any time; that is, such cuttings as will root perfectly well in the full sun, as all Geranium cuttings will do, which would root behind a wall. A spare turf-pit is the best place to put in early cuttings of all the variegated Geraniums; and they are far more safe out of pots, except in the hands of clever propagators. A common box-frame, such as would do for cucumbers, is the next best place, and a brick pit the third best.

Geranium cuttings should never be kept too close; it is wrong to do so, but those that are shy or tender should be well screened from the sun at first; the frame, or pit, or any place about them ought to be damped every evening of a hot day, till the middle of September, but the bottom of the cuttings should have but very little water indeed for just one month after they are put in; the night-air, the dew, and the damp from watering round about them, will keep the leaves up while the roots are coming slowly in a half-dry bed. You might get them to root a week or so sooner by keeping them more close, and by giving more water to the bed; but then, see the risk of over-damping them; perhaps you could not tell that anything was the matter with them till more than one-half of them damped off.

I have known plenty of young men who could strike Heath cuttings, and cuttings of all hard-wooded *Gomphologies*, with little or no loss, and still they could make no hand at Variegated Geraniums; more than one-half of the cuttings would damp or go off, nobody knowing why; but the why was plain enough to common sense; they kept them too close, and gave them five times too much water, just as if they were little bits of twigs from a birch-broom, or their own hard wooded plants. Another thing was much against them; they pressed the sand and compost too much—just as they would for Heath cuttings; but that is not so good as a moderate closeness. If a bed for Geranium cuttings is as firm as you would make the earth in a Geranium-pot at potting time, it is exactly the right state.

SOIL FOR GERANIUM CUTTINGS.

Some people run away with the foolish notion that you cannot have the soil too firm for any cuttings, but, believe me, they are as wrong as they can be on that score. I do not like leaf-mould in a compost for autumn cuttings, and for this reason, that it holds the moisture longer than pure earths, and the moisture from it is too fat for many cuttings; but for spring cuttings, when you have plenty of bottom-heat in a cucumber frame, you might have one-half of leaf-mould, the rest of sand and loam, or peat, because the stimulus from the close-bottom heat is only about equal to the extra fat, or stimulus of the leaf-mould; but now the balance is not fair for fair hands to take advantage of; so you see, after all, that a young beginner might be very lucky in the spring with a hotbed, and yet fail with more common things in the autumn. At all events, it is as well to know the difference.

The best compost for Geranium cuttings may be made with the top soil of a kitchen-garden, or even a shrubbery, with sand enough to make it light, or a little peat and sand; and if it is put into a frame or pit, to have it no more than three inches deep, and a little clean sand on the top.

PLANTING GERANIUM CUTTINGS.

Put in the cuttings in rows across the beds, and rather thick, three inches from cutting to cutting in the rows, and four inches from row to row, or thereabouts; but the size of the cuttings and of the leaves makes some difference; one thing is sure, which is, that the leaves do not get bigger till the roots come to make more leaves; any length, from three to five or six inches, will do for the cuttings. I would make all the cuttings of the variegated sorts of *Tom Thumb* and *Baron Hugel* as long as the shoots would allow, as no more cuttings can be got this autumn from the fresh growth after the first cuttings; still, I would have an eye to the old plants, and cut so as to leave the best form of plant. Some people are so bent on having every morsel of a young shoot made into a cutting that they spoil their old plants. The right way to take cuttings is to leave at least one joint of young growth on the old shoot; as long as that plan is followed, it is impossible to hurt an old plant; as all such joints will break again, whereas, if the young shoot is cut close to the old one, the chances are against another shoot from that part.

BEDDING GERANIUMS.

Skeltoni is a newish bedding Geranium, with nearly white flowers, and horse-shoe leaf. I believe it to be the best of the white-flowered ones for a bed; but we shall soon prove that from a good-sized, round bed of it, which they planted this season at the Crystal Palace, near the new Rosery, between the Rosery and the end of the west wing. *Boule de Nieve* is a nice pot plant

after the pride is taken out of it, that is, after the strong growth is over, and it becomes pot-bound. I am almost certain that the older this kind is the better it will be as a pot-plant. For beds it is hardly suitable, and not so at all in a first-rate garden, because it goes too much to leaf according to the flowers, and the flowers do not stand rain or wind. Even the *Flower of the Day*, and all that breed, do not make a mass of bloom as one likes to see in a bed; but then their leaves and their close habit of growing are the very perfection of a showy bed. If I was "in my element," I would use *Mrs. Woodrooff* *Verbena* to throw a nobleness of scarlet into a *Flower of the Day* bed, which would surprise all the Duchesses, even if I had to pick off some of the leaves of the *Verbena*, and all the dirty red flowers of the Geranium, just as I used the *Duchesse of Amaule* and *Hyder* *Verbenas*, to throw more grey into the *Heliotrope* beds, and as I pricked off the flowers of the *Golden Chain*, and the leaves of the common *Nasturtiums*, to let the flowers be seen.

Of all the Geraniums, *Compactum* makes the most regular show, and it does very well everywhere, but it is a bad scarlet—being neither a scarlet nor pink—still we have no flower like it for compactness of truss, and till we have, never want a stock of young plants of it from August cuttings, and take special care of the old plants, they are so useful for the middle of a bed, and, being of a muddling colour, almost any other kind will do to plant round it or before it. One good way would be thus, in a circle; but any form of bed will do, only the circle allows me to tell easier than any other form of bed. Take one bushy *Compactum*, full three feet high, and plant it in the middle of the circle; then make a circle round this plant twelve inches from it, or two feet across; just outside this circle plant four more bushy *Compactums*, at least ten inches shorter than the first plant, or a little over two feet high; eighteen inches from them plant a row of your biggest plants of *Flower of the Day*, *Mountain of Light*, or *Silver King*. These ought to be eighteen inches high, and their leaves ought to meet round in the circle the day you plant them, and a row of purple *Clarkias*, from a seed-bed of last April sowing (10th April), must be planted between *Compactum* and the variegated, to fill that space to the middle of July; one foot from the *Flower of the Day* plant another row of it with shorter plants, and another of still shorter ones, making a gradual falling with three rows of *Flower of the Day*, or, if you could, the first row with *Silver King*, the second with *Mountain of Light*, and the third with *Flower of the Day*; the leaves are much alike, and there are two if not three shades of scarlet in the flowers. Now plant a double row of *Eucaridium grandiflorum*, which will occupy one foot when at its full spread in July, but only four inches when you plant them in May from a seed-bed, like *Clarkia*. Suppose we have nine inches more, then let them be filled with the darkest of the little blue *Lobelias* in two rows, or in three rows, if the plants are small. The different green of the bands of *Clarkia* and *Eucaridium* will be a good relief on each side of the variegated mass all through June. At the beginning of July the *Clarkia* will be in bloom, if you sowed the seeds on the 10th of April; and by the 10th of July the *Eucaridium* will be in full bloom. I do not know two other plants which are more suitable for this bed than those two; their flowers are two shades of purplish-pink, and the *Eucaridium* is by far the prettiest of the two, and looks as if it were a grandchild of *Clarkia*; the two will bloom till the end of the first week in August, and by that time the *Compactum* will press hard on the *Clarkia*; and the *Lobelias*, with the front of the variegated mass, will want relief from the *Eucaridium*. But if there should be open spaces when the two are cleared off, go at once to the *China aster* beds in the

background, and select a row of tall, mixed kinds to plant where the *Clarkia* stood, and a row of dwarf ones in place of the *Eucaridiums*, and, my word for it, you will never repent of that bed. If the *Eucaridium* was sown on a south border on the 1st of April, and the *Clarkia* on an open piece of ground about the 10th of April, and say, the Geraniums were planted out on the 15th of May, both the annuals would be in bloom on or about the 1st of July, and both would keep in flower full six weeks. Now, seeing the score of the finest annuals which can be had for a mere trifle; seeing, also, that to sow them anywhere from the 1st to the 15th of April; seeing, moreover, that they do not take up one inch of your ground after they are thus transplanted in May into the regular flower-beds, and make those beds look all the better for a long while; I shall never cease to believe that half the world are daft for not taking advantage of them; and the other half of the world very foolish for having their beds so naked all through June, or for six weeks after planting out.

UNION OF THE RHODODENDRON AND NASTURTIIUM.

By the way, I made a new move, the other day, in a beautiful flower-garden, to which I have access at all reasonable and unreasonable hours. I made a "burning bush" of an old Rhododendron, and you never saw such an effect before. There was a self-sown Nasturtium (*Tropæolum*) trailing along, and running over every thing, and what did I do to stop it but strip off every leaf on it which was bigger than a shilling; then to get it more out of the way, it occurred to me to train it all over the Rhododendron; and so I did; tying it here and there till the bush was quite covered; and in a day or two, when the flowers had time to turn to the sun, that bush was the gayest in the garden, and as long as I live I shall recommend the plan for the front of shrubberies, for rock and root-work, for the wilderness, and near water and water-falls. The bushes must be rather bare of leaves to give the full effect. In April, I would send a man round with a barrowful of rich compost from the back-yard; tell him to throw out a spadeful under this bush, and from the side of that bush, and all the bushes I wanted to set on fire that season; then fill the holes from his barrow, and drop three or four Nasturtium seeds in each; and I would tell that man that he must look to them all that season; that he would allow a good tuft of leaves to come at first, till the plants began to "run;" then, that all the big leaves on the running shoots should be cut close off,—not leaving the long foot-stalks, I mean; that the shoots should be trained as regularly as Melon shoots, and tied as securely as Vine shoots, and all the rest of it. Meantime, you might look round the garden, and see if you have some stray plants of this kind looking as if they belonged to nobody; do as I did, or if you have no bushes near, make bushes "out of your own head;" they will answer just as well; or allow me to say how. Make a circle with your finger all round the plant, or clump of plants; then get a lot of the tops of pea-sticks, from three to four feet long; fix them in this ring, with the tops standing out wider than the circle; then put three or four of the longest in the middle; train your plants over these, and you have a burning bush in two or three days; but do not go about and say that it is a plan of your own; because half the garden people read THE COTTAGE GARDENER, and you would be found out, which would spoil the thing for the rest of the season.

D. BEATON.

LONDON UNIVERSITY.—The Professorships of Chemistry and of Practical Chemistry are now united and held by Dr. A. W. Williamson, who formerly held the first Professorship only.

HEATING PITs.—TANKS FOR HEATING.—ROSE CUTTINGS.

"IN THE COTTAGE GARDENER for May last, page 80, I saw mention of a cement tank for heating a Melon-pit, &c.; but it is not stated how it is constructed. We have a pit for a similar purpose (as was mentioned in THE COTTAGE GARDENER of November, 1854, page 149, and also a ground plan of a Vinery with the pit attached to it, January, 1855, page 289), which is now heated with a two-inch pipe, but it does scarcely any good. I should feel obliged if any one would kindly inform me whether we could heat this pit with a cement tank, or of any other sort. The pipes gradually drop all round the pit, from the flow to the return-pipe into the boiler, which is about two feet drop. The pit is about eight feet square. Must the tank be level? or can it drop in the same way as the pipes? and what sized tank will it require for so small a pit? The flow-pipe is above the bottom of the pit, and has to drop from the house into it. I want to strike some cuttings of Roses for pot-culture. When is the best time, and the best mode of making and setting the cuttings?—A CONSTANT READER."

There have been so many articles on this subject, that it is quite impossible to state anything fresh. As plain as others as well as myself have endeavoured to make it, it would appear, from the above letter, as well as from several others lying beside me, that we have so far respectively failed in our object. It would require very specific details of wants before the matter could be made more simple. Part of the misapprehension arises from the strange tales that are every now and then circulated, as to the ease and economy with which houses and pits may be heated by one mode in preference to another. Hence, the vaunted superiority of one boiler over another, and the wonders that have been done by tank-heating, as if there was something mysterious about it, the heat being so sweet and genial, and so forth. Now, much of this misapprehension would be dispelled were two facts kept in mind; first, that no more than a certain quantity of heat can be extracted from a certain quantity and quality of fuel, and that whether a house be heated by pipes, or a tank, if close, be it of brick, slate, or iron, matters not a brass farthing, as to the genial heat it produces. With respect to the first, it may be said that every system of heating by hot-water only involves a loss of fuel; that loss would be lessened by having a flue in addition; but even that would not always be clear gain, as the length of a flue, if at all intricate, arrests frequently the briskness of the draught; and thus, what savours of economy on one hand is apt to entail loss by not keeping out John Frost on the other. A short flue through part of a house would always, so far, be a saving, and then economy in fuel must be regulated in the setting of the boiler, so as to expose all the surface possible to the action of the fire, and keeping that heat about the boiler by regulating the dampers in the chimney.

With respect to the second fact, it should be kept in mind, that provided a tank is close there can be nothing more genial to vegetation from the heat it diffuses, than from a round iron-pipe filled with water. Many sad accusations have been laid on the back of the old flues, to which they might have pleaded innocent with all propriety, for the blame rested on their worn-out state, the carelessness with which they were managed as to being kept clean, or the slovenliness of their construction, which led naturally to these bursts and discharges that were so pernicious to vegetation. Hot-water possesses a great advantage in heating a series of small houses and pits, and in heating any structure whatever, namely, the uniform temperature the water diffuses. In many cases, however, this is no advantage, as it is

often desirable to have one end of a house higher in temperature than the other end. For a single, moderate-sized house, I would, so far as efficiency and economy are concerned, just as soon have a good-built, small flue, as any new-fangled system whatever. There will be nothing more congenial for its heat from an iron-pipe, or an iron or slate tank.

Many amateurs and beginners imagine that some genial virtues escape from iron-pipes heated by water within them, and that still more wondrous virtues escape somehow from a close tank. It is all a mere make believe. The heat that escapes from iron-pipes and close tanks is just as dry and parching as that which comes from a flue, though minus the liability to discharge noxious gases. In such cases, a genial, moist, growing atmosphere must be maintained by evaporating-pans placed on the heating medium, and by keeping the floor of the house moist, and by frequent syringings.

To remedy this inconvenience, we have had tanks more or less open, so that a constant vapour rose from the water, when heated, which gave an atmosphere well fitted for plants in a growing state, and for such plants generally, as the Cucumber, as did not ripen their fruit, though even in their case the moisture was too much in dull weather; but for flowering-plants, and plants to produce ripe fruit, it was found necessary to shut these openings very considerably as the time of flowering and ripening approached. On the whole, after some experience and considerable observation, I adhere to the ideas expressed in some recent articles on "*Pipes versus Tanks*," and would care very little which I had, making it chiefly a question of economy, and preferring, in the case of tanks, whether for top or bottom-heat, that they should be generally close, with power to open slides at pleasure to let out vapour. In the case of pipes, either for bottom or top-heat, it is always easy enough to supply moisture in proportion to the heat. As to the materials of tanks, provided they are sound and free from leakage, and present a sufficiency of heating surface, it matters not whether they be composed of brick and cement, of slate, of iron, or even of wood covered with slate. If of wood, the corners should be well beat before fixing them together, much in the way that brewer's coolers are made. Of course, if of wood, the covering must be a conducting surface, such as slate or iron. Near the end of the second volume is a section and description of a most useful and economical house so heated with a wooden tank; and I was informed, the other day, that it was as sound and good as ever. Even the *unpainted* sides of the pit were perfectly fresh. If such boards had been painted they would have wanted frequent renewals. One other thing may be mentioned, in forming tanks, namely, that a greater depth than from four to six inches is just so much labour and material thrown away. Four inches is quite sufficient for anything. A greater depth is not only longer in getting heated, but the lower portion of water is scarcely heated at all, unless huge fires and a rapid circulation are used and effected. Now to the particulars of this correspondent.

I recollect something of the facts of this small pit, some eight feet square, heated ineffectually by two small 2-inch pipes. It was mentioned, that for early Cucumbers, two pipes of such a size would not be sufficient; and that four or six would be necessary. To cut in May or June, I should consider four, at least, to be necessary, if no other assistance in heating was given. It was also mentioned that 2-inch pipes were not desirable for heating, as presenting so much resisting surface. This, however, for such a small place, need be no valid objection. The question is, would it not be better to increase the number or the size of the pipes, instead of going to the expense of a tank? This is for the person concerned to determine. For myself, I would

be regulated greatly by the economy of the affair, and that would depend much on the nearness and come-at-ability of materials. There are several things besides that are here worth noting. "The pipes gradually drop all around the pit, from the flow to the return-pipe into the boiler, which is above two feet drop." "The flow-pipe is above the bottom of the pit, and has to drop from the house into it." "Must the tank be level, or drop as the pipes?" Much may be got over by those thoroughly conversant with heating and the properties of water as a fluid. In all cases, but especially among beginners, it will be well to keep the following propositions in mind.

1. Whatever the height of the flow-pipe above the boiler, the return-pipes should not descend lower than the top of the boiler until it enters the bottom.

2. Keeping this in mind, where there are various structures to be heated from one boiler, and the pipes in these, whether for top or bottom-heat, are on different levels, it is best to bring the main flow-pipe from the boiler into an open cistern, from one to two feet in height, above the highest pipe to be worked, and from that cistern to take as many pipes as you have divisions to work, and if bottom and top-heat is wanted separately, that must be secured by two flow-pipes, one for top, and one for bottom, from the cistern, and to be worked independently of each other, just as wanted, by means of plugs suiting the various holes which receive the pipes. Sometimes there is a more rapid flow into some than others; but a little management with the plugs will soon make that all right. As already stated, it matters not whether the pipes are level, or some of them as for bottom-heat, three or four feet below those intended for top-heat, provided the lowest part of the lowest pipe is higher than the boiler; and such a position of the cistern gives so much of a column of gravity.

3 It is generally advisable that the flow-pipe should rise a little from the boiler to the furthest extremity, say an inch or so, in twenty feet, and there have an open cistern, or an open air-pipe, higher than the supply-cistern for the boiler, and from that point the return-pipe should just as gradually descend to the boiler.

It strikes me that, independently of the two small pipes, even they may not get justice. We are not told how far the flow extends, or where the supply cistern for the boiler is placed. If, after being taken the round of a house, the pipe merely drops two feet gradually into and around the pit, I can well imagine that the circulation would be languid, and that when not used, air might effect a lodgment, just because a heated fluid would sooner rise than sink down; unless, upon something of the plan mentioned, the principle of gravity was brought in to its assistance with the open cistern, and heating each place separately, there would be no difficulty. I will mention two circumstances that will, perhaps, throw a little light on the matter. I was called in to see the heating of a house that would not work. The house was in the shape of a parallelogram. The flow-pipe rose from the top of the boiler about three feet; and then, from that elevation, one pipe went round the house, sinking gradually until it entered the boiler; near the lowest part the supply-cistern was placed, but sufficiently high to be higher than the highest part of the flow-pipe. On the principle that water will always stand at its level, it was argued, that so long as the water in this cistern, though fastened to the lowest part of the pipe, stood higher than the highest point of the flow-pipe, the pipes and the boiler could not help themselves; they *must* always be full, and circulation take place as a matter of course when heat was applied. If no intervening agency had interfered with this good theory all would have been as right as a trivet.

Science is a fine thing, but there are two sides to a question. Whatever the expectations, circulate the

water would, just when it liked; and capricious it was, as any fairy form could be. You could hear the water roaring in desperation in the elevated leg of the flow-pipe; so hot did it become, that it even went a distance up the lower end of the return-pipe. This elevated piece of the flow-pipe was scorching hot, and still the great proportion of pipe was almost cold. A little more would have burst the pipes, to a certainty. What an evidence of the non-conducting-of-heat powers of confined air! The *rationale* of the whole affair is easily seen. The fire slackens, or goes out; the water in that elevated limb contracts and settles nearer the boiler. That in the pipes and cistern contracts likewise as it gets colder, and wants less room to hold it. The highest point of the flow-pipe, that next the boiler, is thus left empty of water; but air takes its place. When the fire is again applied the water is expanded, presses and compresses the air; but if there is much of it the water might as well try to squeeze through a huge block of granite. A small hole is bored at this highest point, out streams a column of air that would pretty well have gone through your hand like a bullet. Before long, the water comes bubbling up as you have fresh filled the cistern, and then the circulation goes on. Even then, however, it was not quite so good as desired, and so the cistern was placed over the highest part of the pipe, and there was no more trouble with the heating.

In another case, two pipes went round the house, rising gradually for half the distance, and sinking gradually for the other half, the supply cistern being nearest the lowest part. In this case, likewise, circulation was stopped. A small air-pipe, half-an-inch or three-eighths in diameter, and a yard in length, was inserted at the highest point, and there has been no more trouble with the circulation. Where the pipes are by any means unlevel, the expansion and contraction of the water will have a vacuum, as respects water, at the highest points; but that vacuum will be filled with air, which must have free vent before the two bodies of water can meet and unite.

TANKS.

A few words as respects Tanks. If wood is used, it should be the best deal, and from one-and-a-half to two inches in thickness, made as before stated. This covered with slate would answer admirably. Large slabs would answer best if to be close; but if to be moderately open, house slates would answer if there was not much weight placed over them. The width would depend on the size of these common slates. A division should run up the middle, leaving an opening at the end, and this, as well as the sides, will support the covering. The length of the pit, and about three feet wide, would be sufficient for such a place. Whatever form of tank be used it should be level, unless it be strong, and a covering well secured. This is how I would make a cement tank, say three or four feet in width. Lay down some grouting of lime and gravel a foot wider than the tank is to be, and some six or twelve inches in thickness. Let it have time to form and consolidate, preserving the surface quite smooth. On this lay a layer of bricks in lime mortar; on this place another layer on their broadsides in good cement. This forms the bottom of the tank. Lay out its width, say from three to four feet. On this build a dwarf wall all round, consisting of two bricks in bed laid in cement. Cover the whole of the bottom and the sides of the tank with a layer of good cement and sand, and the tank is finished. Alike to help circulation and to support the covering, run a similar wall of two bricks, or one of brick on edge, along the middle, leaving an opening at the further end. Introduce the flow-pipe at the one side at the end, and the return-pipe at the other side of the

dividing wall in the middle, and no more is necessary than filling it within half-an-inch of the covering, and lighting and keeping proper fires.

In the tank alluded to by our correspondent, the water is heated by pipes supplied with hot-water passing through them. It is a mistake that anything is gained in the way of heating by this mode. If the tank is wholly or partially open, and a moist atmosphere is wanted, this is one of the best modes of securing it, as the moist vapour will be more regular than when supplied by moist stones around the pipes. This mode of heating has nothing to do with the construction of the tank, or with the question "*tank versus pipes*," as this is merely a combination of both. I say nothing against such a mode further than this, that in these times a person ought to be contented if he get either the one or the other. It remains only to be added, that when a tank is used for bottom and top-heat, there ought to be conveniences for allowing the heated air to rise into the atmosphere. A hollow space over the tank, with slides to let the heat out at pleasure, would effect this. A very simple mode accomplishes this in the house described p. 337, vol. ii., in the number for September 27, 1849; and many other modes will at once suggest themselves.

ROSE CUTTINGS.

Spring and autumn are best for making these, but the present time is very good. Attend to the excellent article by Mr. Beaton, and do as he directs. That article cost me some hours extra writing, as I had one with very similar ideas nearly ready. I am glad that the hand-lights have got another condemnation as to their comparative uselessness, and the very frequent chinks and crashes they receive from all that come in contact with them are very apt to give severe strokes to the equanimity of temper of all who have to superintend them. When any lower squares are broken, I am glad to get them filled with anything else but glass, as I have never been able to keep the points and heels of hob-nailed shoes from trying which was strongest. The using of loose squares of glass for propagating purposes, I believe, we owe to the veteran Mr. Mearns, who, like many more of us, was too enthusiastic in his profession to look enough after his pecuniary interests; but, so far as I know, the using at this season, out-of-doors, the next to bottomless pot, with a square of glass over it, is a *Beatonian* idea; and a most capital one it is, giving, in a warm day, all the advantages of a thorough hotbed, without any risk of scorching by the rays of the sun, or steaming and destroying by ammoniacal vapours from-decomposing fermenting matter. R. FISH.

WINTER GARDEN AT SUNDERLAND.—It is proposed, at Sunderland, to have a winter garden under glass, and connected with a Museum, Bazaar, Exhibition and Concert Hall, all under one roof. If the subscriptions to effect the purpose are actuated by the same illiberality as that which dictates the offer of £20 for the best plan, it must have its foundation-stone laid on the next 30th of February.

HILLINGDON HALL.

THE SEAT OF CHARLES MILLS, ESQ.

WITHIN ten or fifteen miles of Uxbridge there are a considerable number of places where gardening is carried on with great spirit and success. Mr. Beaton, in his reports of the successful exhibitors, has very often to mention my neighbours, and none more frequently than Mr. Constantine, the gardener at the place I am about to give an account of on this occasion.

Mr. Fish has lately written a paper on visiting gardens, and has made some well-timed and very judicious remarks on the benefits gardeners would reap by a more frequent visiting of gardens at a distance from their home. He has made a sort of a challenge to me, to induce me to give reports of places that I may visit in future, and requests me and others to give directions how to reach any place we may visit, so that others may, without loss of time, travel from some fixed point to see gardens where the art of gardening is carried on well.

Hillingdon Hall garden is such an one, and any gardener wishing to see it should start from the Great Western Railway Station, at Paddington, by the seven o'clock train. He would arrive at the West Drayton Station in little more than half-an-hour, and would then have to walk rather more than two miles to Hillingdon Hall, and might see that place, and Hillingdon Park, R. Cox, Esquire's seat, which is close to it; and then might, if he chose, take the rail again to Windsor, and see the Royal Gardens there, and return to London the same evening. I am sure he would be highly pleased with a day thus spent.

Excepting the walls, the gardens at Hillingdon Hall have been entirely remodelled within the last seven years; that is, since Mr. Constantine undertook the management. Perhaps there is no place, at least in this neighbourhood, where so many new houses and excellent pits have been put up in so short a time. Indeed, on entering the garden it looks like a little town of glass, and the improvements are not confined to the garden alone. A splendid new mansion has been erected and is just finished, new stables are in progress, and the old house is being pulled down. The new mansion is built on a gentle eminence commanding extensive views. The pleasure-ground, too, has undergone great alterations and improvements. Mr. Nesfield, the eminent flower-garden designer, has been employed, and has formed and laid out two very elegant flower-gardens in his peculiar style. One is on the east and the other on the south side of the house. On the west side there is a large sunk flower-garden, which was on the south front of the old house. This is very judiciously retained, and thus the new mansion has three flower-gardens, on three sides, all of a different character. On the west side there is to be a large conservatory, and a stove for exotic plants from warm latitudes. Somewhere close to the new house, it is difficult to say where now, there were, two years ago, several glass houses for the growth of plants, Vines, Peaches, and Nectarines; most of them have been removed within the garden, to clear the space for the new pleasure-grounds; also the farm-yard buildings have been removed to a greater distance for the same purpose; and many large trees lifted by Mr. Barron's machine and planted again in proper situations. These will give the reader some slight idea of the extensive and expensive works that have been going on at this place for several years. When the noble terrace walks are completed, the conservatories built, the park formed, and other alterations in progress are completed, there will be few places in the kingdom more attractive and complete.

In the pleasure-ground there still remains a vinery planted with Muscats in a somewhat peculiar manner. Inside the house (which is a narrow one) there is a bed of rich earth raised, forming a pit about four feet wide. At each end two strong Muscat Vines, and four more in the centre, were planted three years ago, with the intention of forcing them early. They were trained lengthwise, that is, not up the rafters, in the usual way, but across them. They grew quickly and strongly, and produced a fair crop the second year, and have continued to do well ever since, and so they ought to do. Every good point of culture was put in practice to

obtain good early fruit. The border, and, consequently, the roots, was all inside and under control; no heavy rains or severe frosts could possibly reach and injure the roots. Root-action and top-action went on simultaneously. Hence there was no disease attacking the fruit, nor any check to regular progress, from the buds breaking to the fruit ripening. Such a narrow lean-to house is easily heated, and every process of vegetation completely under control. I am certain such a house would pay well to grow early Grapes for the London market. It might be put up and heated for twenty shillings the running foot. When I saw it this year the fruit was just changing colour and must be now nearly ripe. It will have to be removed as soon as the Vines can be taken up, and will be put up again in the same way.

In passing through the pleasure-grounds I noticed a fine tree of that beautiful Pine, the *Pinus nobilis*, eight feet high, with branches spreading over a space nine feet in diameter, and well furnished down to the soil. This tree was purchased, at a great cost, from Mr. Barron, at Elvaston, moved from there, all that way, in the autumn of last year, planted on the level, in a prepared soil, on a dry subsoil. It stood the winter well, has not lost a single leaf, and is now growing freely; showing that the man who took it up, the man that packed it, the carrier that brought it, and the planter, all did their work carefully, properly, and well. This handsome Pine ought to be in every garden. It is very beautiful, keeps its colour all the year, is perfectly hardy, and grows freely. The only drawback on its general cultivation is its high price; a plant a foot high will cost ten shillings, or more, in proportion to its being furnished with branches and a decided leading shoot. It is a great pity somebody does not collect a quantity of seed in its native country (California), and send it over, so that nurserymen could afford it at a cheaper rate. The finest specimen of it is at Chatsworth.

The grand treat, however, at this place, is, at present, the kitchen, or rather the forcing fruit-garden, for it is nearly covered with glass. There are three Vineries, four Peach-houses, eight pits (forming a square), each six feet wide and thirty-four feet long, and one pit a hundred feet long by six feet wide, besides various pits for Pines, Cucumbers, Melons, and to force Violets and other early flowers. This account will give some idea of the great extent of glass in those gardens. I have omitted the plant-houses, for they are in the pleasure-ground, and are to be taken down and put to other uses.

The Vineries are by no means small, paltry things. The largest is planted with Black Grapes, and is span-roofed, eighteen feet wide and fifty-five feet long; the one adjoining it is for the Muscat Vines only, it is the same length but narrower (thirteen feet wide). The remaining vinery is for forcing early; I saw the place in June, and the Grapes in this house were actually shrivelling with being so long ripe. There is a remarkable circumstance respecting the Vines in the latter house. They were planted four years ago in houses now removed. The Vines were then three years old, and had borne heavy crops of excellent fruit, which I had the pleasure of seeing repeatedly. They were strong and healthy, and the anxious query was, would they remove safely, and flourish well afterwards? Mr. Constantine determined, at all events, to try. As soon as the houses were removed, altered, and fitted up afresh, with the necessary additions of a new boiler, pipes, and the borders made of the best materials, the Vines were carefully taken up, every fibre preserved as far as possible, and planted. Such care was rewarded with complete success. Every Vine grew and made very decent wood, and this year they are bearing a good crop of excellent fruit. The roof being of the span form allows iron rods to be placed across the houses in a half-circular arched form. The Vines are trained to

them and form a most pleasing spectacle. They were kept their whole length, and many of them reach nearly all the way across the houses. The early Vinery is trained in the same way, and, consequently, is also span-roofed.

Two of the Peach-houses are placed against a south wall, and are, therefore, the old-fashion *lean-to's*. They adjoin each other, with a glass division between them. When I saw them in June, there was in the first an excellent crop of ripe fruit, of a good size and colour. The trees (two only in each house) were planted inside, close to the front glass, and extended over the whole house. I never saw, in all my travels, finer, healthier trees, nor a better crop of fruit. It had been severely thinned, and the result was, the Peaches and Nectarines were of a large size, and well-coloured. Another Peach-house was a span-roof, seventy feet long by sixteen wide. This house was originally put up as an Orchard-house, on Mr. Rivers's plan; but the trees, though they grew well enough, and bore fruit, did not come up to what was expected from them. Mr. Constantine, therefore, had them all taken up, and an arched trellis of wire-work thrown over the whole house. Peach and Nectarine-trees, and one or two Apricots, of a good, bearing size were taken up, in November, two years ago, very carefully from the open walls, and immediately planted. They bore some fruit the succeeding season, and this year they have a full crop on them, excepting the Apricots, which kind of fruit does not seem to bear well under a glass. There are in this house two trees of the far-famed Stanwick Nectarine, with a fair crop of fruit on them. It appears to be a very late kind. In the early Peach-house there were two trees in pots, started at the same time as the Peaches; but they had not even commenced to swell after stoning, though the fruit on the other trees was ripe. I fear this kind will not prove so good as was expected.

The remaining Peach-house is a very large, span-roofed one, and was only finished last summer. It is not heated at all artificially; the intention being merely to protect the trees by the glass covering from the late frost, and to ripen the wood thoroughly in the autumn. Here, again, the trees were, when planted last autumn, of a considerable size, and so well where they taken up and planted, that they are growing freely, and many of them bearing this summer a full crop of fruit.

Mr. Constantine has been for years a successful cultivator of Vines in pots, and has frequently exhibited them, and won first-class prizes with them at Chiswick and the Regent's Park. Two or three years ago, he, finding the growing of them on the single-rod system rather cumbersome, resolved to try the bush system. He first raised some very early from eyes, and kept them very severely stopped. The second year they were cut back to three buds. These were all allowed to break, and a stick placed to each shoot, spreading them out widely. They were again severely stopped, and thereby kept low and bushy, something like a young Currant-tree. In the autumn, these were again pruned low, and about three buds left to each shoot. When they broke every bud showed fruit, some one and others two bunches to each bud. These were the Vines in pots that were exhibited at the Regent's Park, and so highly praised by Mr. Beaton in his report of that exhibition.

The long pits are occupied with various useful things, some with fruit, and others with plants. One, a foot or so wider than the rest, is planted with Figs, and heated by a single row of pipes, and well they answer. The first crop was ripe, and a most abundant second crop was advancing fast towards their full size. The trees filled the pit completely. They were trained, but allowed to form natural bushes. They were supplied with manure-water when growing, and were in a most

luxuriant, healthy state. This appears to me to be the very best mode of cultivating this luscious fruit.

Two pits are used for forcing Strawberries. They are placed on stages, corresponding to the span-roof, and very well they answer. Finer British Queen never were produced in pots. The mode of giving air to those pits, is, I think, admirable. Every light is hung to the centre beam with strong hinges. A flat rod outside the wall has holes in it; in the centre of each light there is an iron button. When air is required, the iron rod is lifted up and slipped on to the button, which turns to keep it in the desired position, so that air can be given in any degree, from two-inch apertures to four inches, and so on, till the lights are lifted up to an horizontal position. It is evident the Figs, Strawberries, and other plants in those pits, are then receiving the greatest possible amount of air, short of actual exposure, that they could have. The circulation of air is thoroughly complete, for the lights are opened on each side.

I find I have not space for all my notes on this highly interesting place, and, therefore, I will conclude by stating, that I never visited a place where so many interesting points of the gardening art met with my attention. The place is well worthy of a visit, especially to a gardener that can appreciate horticultural skill and success.

T. APPLEBY.

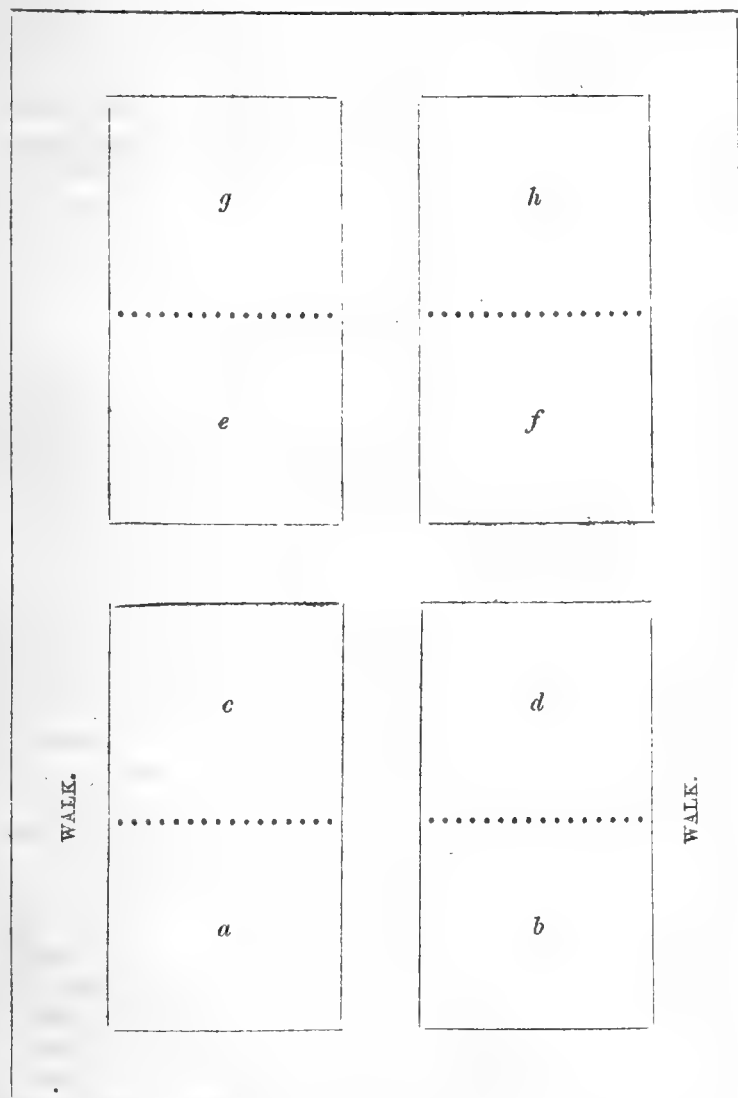
GARDENING FOR THE MANY.—AUGUST.

KITCHEN-GARDEN.

GENERAL REMARKS.—I believe the fine weather of the latter part of June and early part of July was pretty general throughout England; consequently, a great advance has taken place in vegetation of all kinds. At the same time, the hot, dry weather has not continued so long as to occasion a premature ripeness, for the fine rain we had on the 11th inst. seems to have been widely enjoyed, and it is needless to say that everything has benefited by it, for in dry places the various crops were suffering very much from the unclouded sunshine of the preceding week or two, while some showers since the 11th indicate that we may not suffer again; but as my purpose is to report the past rather than predict the future, I may here add the gratifying intelligence that I have not seen the least symptom of *Potato disease*; neither have I heard of it amongst my neighbours, up to the time I write (the 20th inst.), and as the crop has already got farther advanced than is usual when it is attacked, there is hope that the losses that way will be trifling this season as compared with others. *Peas* have been tolerably good, also, as have *Cauliflowers* and *Cabbages*, both being more free from Caterpillars than usual, which is of no small importance. *Lettuces* have also been good, as have spring *Turnips*, and many minor crops; and where *Carrots* have succeeded they look well; as also do *Onions*, although, in one or two instances, I have seen the effects of "the grub" amongst them; in general, however, they are promising; and *Dwarf Kidney Beans* and *Scarlet Runners* have both made good progress during the hot weather, which was just what they wanted; while the seedling beds of *Brocoli*, *Brussels Sprouts*, and similar things began to suffer very much until relieved by rain; in fact, the whole Cabbage tribe were looking very blue before the rain set in.

Fruits are, however, more uncertain. In some districts, the caterpillar has been very busy amongst the *Gooseberries*, while a sort of blight has affected whole orchards in a wholesale manner. There is, I am aware, nothing definite expressed in the word *blight*, and it would be well if we could discover a more correct name of the evil which it is meant to represent;

suffice it to say, that certain orchards, variously situated as regards aspect and soil, have been alike attacked, long after the danger from spring frosts was over, and the foliage of Apple and other trees exhibit much the same appearance as if scorched; the fruit of course, is gone. Certain it is, that *Cherries* are good and plentiful; and the larger fruits will, I think, be tolerably so. *Red Currants* seem small, but the *Black* have grown out well, and now, being about ripe, they promise to be quite an average crop. *Filberts* are also good, being more free from insects than usual; *Raspberries* are also good, the partial failure of last year being owing, in a great measure, to the young canes of the former year bearing fruit then, which some kinds did to their detriment last year; whether they do so this time or not remains to be seen. *Strawberries*, also, are good; and so far *Wall-fruit* is abundant, and the trees healthy, *Pears*—especially some sorts—being thin in places; but *Walnuts* are good.



a.—The *Strawberries* will be all over now, and the late kinds, as *Victoria*, *Elton*, and others, will be getting on more or less quickly as the weather is, so that the rows of plants may have their summer dressing in the shape of clearing away all runners, weeds, and whatever material was laid down to keep the fruit clean; and if a little short dung was laid down and slightly dug in, so much the better; but a better way still, would be to give the bed a good watering with liquid-manure. *Raspberries* will be in full bearing, and if the *Falstoff* kind be in use, occasional fruit is often obtained for a very long time; daily gatherings must be made where it is intended to make the most of them; preserve suckers if they be wanted, if not, a considerable portion might be destroyed at once, if not done before. Be especially careful not to allow the

wild *Convolvulus* a place here; and give the whole occasional hoeings and rakings, which, after the ground has been trodden upon in wet weather will restore the surface to good order again.

b.—By the beginning of this month the whole of this plot will be under winter crop, except the small portion where a few *Potatoes* were reserved for seed. The various *Brocoli*, of which a list was given in the spring, will be all planted, and the last of the *Turnips* sown by the beginning of the month. Little more is wanted, save to make up deficiencies; *Turnips* especially being subject to the flea this year; but the amateur may guard against that in a great measure, by mixing sulphur with his seed, and sowing soot or wood-ashes over his beds every morning for some time after the third one from sowing time. Having the ground in good order is also an excellent preventive, as the plant pushes up into vigorous growth before it has time to be attacked, and is speedily out of the way of the flea, &c.

c.—The permanent nature of the crops on this plot renders many remarks unnecessary. Salt, however, may occasionally be scattered on the *Asparagus* bed, and also on that of *Sea-kale*, but *Rhubarb*, not being a maritime plant, requires a more nutritious food, if it can be spared. Keep all weeds away, and do not let anything usurp more than its allotted share of room.

d.—The *Onions* which the late spring retarded will, nevertheless, be far advanced by the time this reaches the reader, and as soon as they are ripe, let them be gathered and laid to harvest in some vacant, sunny space, as this ground is wanted for *Celery*, which ought to be planted without delay. Single trenches, about three-and-a-half feet apart, from centre to centre, and not by any means deep, a good coating of well rotted dung, and some of the top soil mixed with it, will suit *Celery* best. Earth-up the first row planted as soon as it requires it, and if dry weather sets in, a good watering now and then will be of service to the whole. Let the *Onions* have a good hardening in the sun before they are carried to the place for wintering them.

e.—Remove all *Peas* as they get past use, and in gathering those in bearing be careful not to injure the *Brocoli* amongst them. The rain we had in the middle of July has lengthened the haulm of *Peas* very much, and improved their bearing on light soils. Take care to make good all deficiencies in the *Brussels Sprouts*, *Savoys*, and other crops here, and immediately the *Peas* are removed let the ground be slightly stirred, and the site of the *Peas* ought to have a good soaking of liquid-manure, to induce the roots of the *Cabbageworts* to occupy that space. A little earthing-up will be necessary, but not until the plants have attained a more robust growth than they have while encumbered with the *Pea*.

f.—As *Kidney Beans* form the whole crop on this plot, either of the runner or dwarf kinds, little can be done here save keeping the ground clear of weeds, and occasionally tying up the runners to the poles or stakes they are trained to.

g.—Little is wanted here save keeping the ground clear of weeds. The *Carrots*, it is supposed, were sufficiently thinned last month, and the *Beans* all planted which the plot allowed off. Nothing is wanted save removing the first crop of *Beans* when done with; and as it will be some time before the *Carrots* are fit to house, keeping all in order is the only direction that need be given now.

h.—There being some of the early *Celery* on this plot it must have due attention, in the shape of earthing-

up, watering with liquid-manure, &c. Plant out, also, a good breadth of *Endive*, and also some *Lettuce*. The latter might be upon the Celery ridges, if done by the first of the month, but if later, they will not have time to get off before the ridge is wanted for earthing up with. Keep all clear of weeds, &c.

KITCHEN-GARDEN BORDERS.—Sow some of the *East-Ham* and *Queen Cabbages* about the 1st and 12th of this month. *Lettuce* of the *Brown Cos* and *Hardy Hummersmith* may be put in at the same time, and again towards the end of the month, adding a little *Brown Dutch Lettuce*. *Cauliflowers* may be sown at the end of the month, or rather the beginning of September, and a bed of *Onions* to stand the winter may also be sown in the middle of the month. *Spinach* towards the end, and, perhaps, a bed of *Carrots* at the same time. All these things ought to be on a good, open, sunny situation; the shady borders being occupied by such summer crops as *Lettuce*, &c., which are placed there to keep them cool, and prevent them running to seed. *Radishes* may also be sown, and some of the winter *Endive* may be planted out as it arrives at a proper size. Some *Herbs* may also be cut and dried for winter use, and *Shallots* and *Garlic* stored away. *Small Salading* may be sown as wanted, but after the middle of this month it ought to have a place under glass. If there are any plants of *Cucumber* or *Vegetable Marrow* on the border requiring trimming-in, let that be done, and scatter sulphur on the leaves affected with mildew. If the weather is very dry, good waterings will be of great service; and, what is of much importance, remove all crops immediately they are no longer wanted, as they rob the ground sadly of its moisture, besides the disagreeable appearance they have, which, of all things, it is imperative to avoid. Weeds and other litter, of course, being cleared away.

FRAME.—Presuming there to be only one box-frame, it will now be doing duty in the way of producing a crop of *Melons*, which will require care, in the shape of keeping away insects, and maintaining the health of the plants. Gentle waterings during afternoons, and shutting up close, will do, in a general way, to keep away Red Spider, and a slight fumigation whenever green fly shows itself will put a stop to Green Fly. Other particulars on Melon culture will be found in other places.

ROCKERY.

The great mass of herbage which sometimes at this season overruns everything here ought to be occasionally trimmed, otherwise some of the most valuable plants will be liable to get lost; at the same time, very little training must be allowed, as the plants on rock-work are expected to assume more of a natural aspect than they do in dressed grounds. Certain new plants may also be introduced, from time to time, but, in a general way, few tall-growing ones are wanted, except those which support themselves; for instance, "*Fox-gloves*" are quite admissible, as being often found in such places.

FLOWER-GARDEN.

The abundance of flowers with which this may be furnished ought not to relax the anxiety to obtain more for another season, as a survey during the present period will enable the cultivator to see which can be dispensed with, so as to introduce a more deserving one. Propagation of favourite kinds may also go on. *Rockets*, *Catchfly*, and other plants, increase freely by dividing the plant so as to secure a little root to each, or if none, they soon make roots at this season: at the same time certain seedling plants, as *Sweet Williams*, *Wallflowers*, *Stocks*, *Silene*, *Canterbury Bells*, &c., require planting-out where they are to flower, which ought to be

done when they are ready, taking care in planting them not to do so immediately in contact with other permanent plants, as bulbs, &c. *Annuals*, which in all probability are nearly over, may be disregarded in such planting, as futurity is the order of the day now. Cut all flowering plants down that cease to be ornamental, and clear all rubbish away. Sow a bed of *Annuals* of various kinds in some sheltered corner of the kitchen-garden border about the third or last week of the month, to plant out in patches in the autumn or early spring, for next summer's flowering. In a usual way, the earliest spring flowering ones are best, as *Nemophilas*, *Collinsia*, *Virginian Stock*, *Schizanthus*, and others; while the *Coreopsis* tribe are all the better by being sown now as well. Tie up *Dahlias* as they advance, but only slightly, as the stiff, formal mode of preparing those flowers for exhibition is very unsightly for the flower-garden. Cut away all straggling growths in *Roses*, and give them a good soaking of manure-water immediately after the flowering is done, which will restore the vigour of the plant, and whether it is expected to flower in September or not, it will put it in a condition to flower well at the proper time. Tie-up and trim all plants having ungainly habits, and keep the whole in neat order—the grass being well-mown, and the gravel and other places smooth, and free from every thing not wanted there.

J. ROBSON.

A CASE OF TRIAL.

By the Authoress of "*My Flowers*."

(Continued from page 275.)

WHEN first I became personally acquainted with Mary Waller she was advancing considerably in life, and was in the enjoyment of her own little—alas! how little!—independence. But to her it was really wealth, and it is surprising how much she made it do. Her dress was beautifully neat; and she was so scrupulously attentive to cleanliness, and to propriety in the choice and style of her dress, that it could hardly be supposed her means were so very limited. She dressed as elderly ladies ought to dress, with simplicity, closeness of form, and quietness of colour; and she seemed never to soil or disarrange it. Her health was not very strong, and she seldom took exercise; but she sat busily at work, always ready to converse, or to say and do a kindness. Her heart was particularly alive to the sorrows and trials of others. She had known and suffered so much herself, that she was prepared to enter warmly into any sorrow; and she had many friends yet left for whom she had strong sensibilities. Her sense of right and steadiness of moral principle were strong: and she could never bear to hear the slightest remark which savoured of unkindness or want of rectitude. Her benevolence, too, was great, and I have no doubt that she endured much from not being able to give what her heart evidently dictated; for she could never pass an object of distress without the ready penny in her hand, which would have been gold, had her means permitted it. It needs not wealth to show the liberal heart. There is a way of doing trifles—giving mites—offering the simplest things—that shows more plainly than silver and gold where the heart stands, and what its feelings are. Yes; there is even a way of giving *nothing* that speaks volumes.

Miss Waller was at this time staying for some months in the house of the lady—the daughter of a deceased friend—who was so happily enabled to make a provision for her comfort by the increase of her income. She spent the first winter of this dear friend's widowhood under her roof, and from that visit she passed on to the Channel Islands, to a cousin, also a widow, who, with one daughter, and both in poor health, with only small pensions to support them, had settled in one of those cheap and delightful Islands, where they could live upon a very trifle, and yet maintain their station with respect and comfort. Here Miss Waller finally resolved to settle. The united incomes of the three ladies made a very comfortable whole—the climate suited her—

she was strongly attached to the cousins, and she had no nearer tie.

This might be said to be Mary Waller's halcyon time. She was really at home—her own home—and, though living with others, she was independent and comparatively affluent. How graciously are we led through the thorny paths of life! Even in the most rugged, the most trying, dispensations, mercy is mixed with all; and here and there a resting-place is found for us, to give us refreshment and help us on. The life of man may be compared to the vast desert of a burning climate, where the traveller often labours and sighs, as he struggles onwards through barren and unlovely places "where no water is." But even amid those burning sands, Almighty Love prepares cool spots to shelter and refresh the parched traveller. A grove of trees, carpeted with grass, and nourished by a spring of "cold flowing waters," stands amid the howling wilderness, where man and beast slake their thirst, fill their vessels, and recruit themselves for their onward journey. Thus, with Mary Waller, her Heavenly Father gave her a time of rest and comfort before greater affliction came on, and she passed some few years in much tranquillity.

The first event that stirred their quiet life was the death of Mary's cousin. But still the daughter and herself sat by their fireside together, and together wept their loss. Their lessened means still sufficed for their few wants, and though Miss F. was in very delicate health, they were happy and easy in their small lodging.

But a trial awaited poor Mary which tried her much. Her sight began to fail—not the natural decay of vision, but a total blindness came upon her, and she became, of course, so far, helpless. This was a real affliction to one situated as she was; but this came not alone. She had a severe fall, which broke her leg, and obliged her to become a still greater burden upon her kind cousin. Her age, her large and heavy form, and, perhaps, the nature of the fracture, prevented her ever again using the leg, and she was entirely confined to her bed, from which there is now no expectation of her ever rising again. Blind, and a cripple, she was now wholly dependant on her affectionate relative, and a source of deep gratitude it was that she had such a soother of her trials; but, in the inscrutable providence of a loving and gracious God, *this prop* was also removed. Miss F. was taken ill, and died in a very short time, leaving Mary Waller helpless and disconsolate.

Perhaps no situation could be more distressing than this; yet mercy was mixed with it still. A lady happened to be staying in the island at that time who knew and loved the poor sufferer for many years, and who stood forward in the breach at once to help and comfort her. This lady wrote to Miss Waller's acquaintance in England, stating her painful situation, both as to person and means; and proposing that a subscription should be made, to enable her to exist in some way without appealing to public charity, being unable to move or help herself. A small sum was collected, which raised her income to forty pounds; a trifling sum for one who must need many things, which, to a person possessed of all their powers, might be dispensed with; but we know that He who numbers the hairs of our head, orders and governs the smallest incidents of our daily life, as well as the greatest events that can befall us; and He doeth all things well. A family, with whom Miss Waller was well acquainted, and who are settled in the Island, have taken her as their inmate, to whom she pays three parts of her income; the small remainder is given to an old and trusty servant, who knew her from her youth, and who is now engaged to watch over her. These are great mitigations; but when does our Father lay upon us *more* than we are able to bear?

Reader! on glancing over Mary Waller's story, may we not call it a tale of trials? From her youth she was acquainted with sad bereavements and personal privations, which, to the young, are very trying to their lively affections, and fervent spirits, and eager tastes; and in her old age she lies, a blind and helpless cripple, on a bed from which she never will rise again! Ah, dear readers! are there not some of us, perhaps, repining at a lot far more easy than Mary Waller's, and thinking ourselves the most tried and afflicted of our race? Are there not some of us who may take profitable instruction from her history, and learn to bear meekly and patiently the lighter rods that may lay upon us?

In the inscrutable providences of the Lord, some are born to suffer extremes of trial; but "is there not a cause?" It is a Father's hand that deals out the portion, and He sits by the refining fire. It is a mark of remembrance, and not forgetfulness, when we are hardly dealt by, and if we kiss the rod, its smart will pass away. Let the sharpness of Mary Waller's dispensation fill us with sympathy for her, and gratitude to Him who has softened our corrections, and laid them, *as yet*, more lightly upon us. Above all, let us pray and strive for grace to use *profitably* our different trials, and to seek that they may turned into gracious blessings; and let us, when we are tempted to murmur at our burden, think of Mary Waller, and turn our lamentation into prayer and praise.

ALLOTMENT FARMING.—AUGUST.

IMPROVEMENT OF TOOLS.—Although allotment farming and gardening comprehend a great deal in a small space, it is advisable to economise labour as much as possible, by directing attention to any implements worthy of particular notice, or to the invention of a superior class of new ones. The advancement in agricultural improvement is, in a measure, to be attributed to mechanical inventions. The encouragement given by the Royal Agricultural Society to produce a superior class of instruments is a movement in the right direction. The emulation that is produced by giving prizes to those who have applied their mechanical skill to the advancement of agriculture has been productive of most useful results. To the science of gardening mechanical skill could be applied with advantage. If prizes were given, at horticultural shows, for improvements that may be made in garden implements, it would arouse a spirit of invention on the subject that would produce some useful results. The mechanics of agricultural improvements are generally indebted to the suggestions of farmers for each succeeding step in their progress of improvement. At an agricultural show the individuals most interested in the subject are present to appreciate the value of each invention. The prize is not so much the object with the inventor, or improver, as to know that the exhibition of them at such places, where their merits would be appreciated, would do much for their sale. If the same system was adopted at horticultural shows, it appears to me that similar results would follow.

As the implements for farming purposes are generally worked by horses, a class of tools more suitable for allotments, to be worked by manual labour, would be of great service to a large number of very useful and industrious members of society. The Crystal Palace, and other Societies, could very much encourage the production of such implements by offering prizes for any invention, or improvement of them, that would seem deserving of such awards. In several counties in which I have lived, I have seen some garden tools, or implements, in one, that are not known in another. Even a knowledge of the best tools at present in use would help to abridge the labour that is required to be done in many places. If mechanical skill and invention were set to work, there would be no lack of competitors, not so much for the object of the prizes, as to have an opportunity of exhibiting their productions before persons who are always ready to reward merit. When the fact is so generally known that great improvements in the cultivation of the soil have been produced by the force of mechanical science, it is reasonable to expect that if the same impetus were given to push on improvements in allotment implements that similar happy results would follow. The drill-rake, transplanter, and other useful implements for general or particular purposes, are only rarely to be met with. What is the reason? Because they are not exhibited to public notice. The implements suitable for allotments are not generally of such complicated structure, or mechanism, but that a man, by seeing them, would be able to judge pretty correctly of the powers of each, and how far they were likely to answer the purposes for which they were intended. By degrees they would extend to the towns and villages, and to all places where there was a probability that any valuable or a new invention, or an improvement on the old, would be

appreciated, and that those best adapted for their specified purposes would pass for their sterling value, and that the others found deficient would be rejected as worthless.

CLOVES, CARNATIONS, AND PICOTEEs should be layered at once. The pegs for fastening them can be made of any small, green twigs, such as privet, willow, &c., cut to the lengths desired, and bent double when they crack at the angle, and remain sufficiently tough for the purpose intended.

ROSES in abundance should adorn the garden of every cottager. The half-ripened wood of China, Noisette, and other Roses should be put in a shady border where they will strike freely. Proceed with budding when the bark rises freely.

CUTTINGS OF SCARLET AND OTHER GERANIUMS will now strike in the open ground, exposed to the sun, and watered occasionally if the weather is dry.

All FLOWER SEEDS should be gathered as they ripen. The capsules or seed-pods of Carnations, Picotees, and Pinks, should be covered, or they are apt to rot.

A few CUTTINGS of every description of plants for bedding-out should now be put in, to be potted off before autumn, when they become strong plants, and better able to withstand the severity of winter.

The better sorts of HERBACEOUS PLANTS which it is desirable to multiply should be now increased by removing the side-shoots.

DAHLIAS must be regularly tied up to their stakes, as they are now making vigorous growth. Occasional waterings with liquid-manure will be of service to them and to every crop to which it is now applied.

When sticks for SCARLET RUNNERS are not conveniently at hand, attention must be paid to topping, which has the effect of inducing abundant produce.

LETTUCES.—Sow a few seeds of the *Brown Coss*, *Black Seeded Green Coss*, *Hammersmith*, and *Brown Dutch*, for standing the winter.

ONIONS.—The tops of the main crop should be gently laid down, and the pickling sort taken up and dried, for if any are left too long in the ground they often make a second growth, which spoils them for keeping. Many market-gardeners around London sow their main crop about the middle of the month, they are thinned out in the spring, and sold as young Onions, and the crop is ripe and cleared off the ground by the middle of May.

SPINACH.—About the end of the month is a good time to sow the main crop of the winter, or prickly sort.

CABBAGES.—The *Early York*, *Vanack*, *Battersea*, or *Fulham*, are good sorts to be sown about the middle of the month for transplanting in spring. All seeds of plants left to stand in the seed-beds during the winter should be sown thinly, to admit a circulation of air so needful for stout growth.

CULTIVATION OF RYE.—The seed should be sown about the end of the month, at the rate of three bushels to an acre. It delights in land of a sandy or gravelly quality, and of fine tilth. It should be sown when the weather is perfectly dry, and the land slightly harrowed, so that it may be covered as lightly as possible, and left without rolling. If the Rye is very forward (which, from having a mild autumn, is sometimes the case), it will, in the event of a heavy fall of snow succeeding, be sometimes greatly injured for spring use; but it should not be fed off, as it never comes well to the scythe afterwards. By manuring or top-dressing a portion, the produce is a week or ten days earlier, which, in ordinary seasons, gives a successional cutting from the commencement of April.

WINTER VETCHES may be sown this month or any time in the next, in good, dry, and deep ground. About the one-sixth part of wheat mixed with the seed assists in supporting the Vetches. To be sown broadcast, and covered by harrowing and shovelling the furrows.

RAPE will produce a fair crop on a great variety of soils, and at a considerable elevation, but, like all other crops, the better the land, and the more carefully it is prepared, and the greater the attention to after-management, the better will it remunerate. A sowing of the *Broad-leaved Dutch*, or Winter Rape, should be sown broadcast early in the month, at the rate of 10 lbs. per acre. It is often taken as an intermediate, or, as it is termed, "stolen" crop, on land from which Vetches or early corn have been removed. When

the crop is eaten or cut down in spring, it leaves the land in a fine state for barley, or the crop may be left to produce seed, for which a good round sum may be received, but at the cost of much injury in exhausting the land.

WILLIAM KEANE.

BEE-KEEPER'S CALENDER—AUGUST.

By J. H. Payne, Esq., Author of "The Bee-Keeper's Guide."

THE SEASON.—The season has been by no means a good one; but in certain favourable localities very strong stocks will have a little honey to spare; but even in these places weak stocks have become more weak and are wasting away to nothing. I have not yet heard of one good glass of honey having been obtained this season.

SUPERS.—Supers must be removed with great caution, for unless the stock be left with at least twenty pounds of honey, the trouble of feeding will be incurred as well as the risk of losing the stock. In removing a super, should it be found to contain brood in the centre, it will be better to replace it until the brood is hatched; but the colour of the combs will suffer greatly.

SWARMS.—Swarms have been generally very scarce this year as well as very late, owing in all probability to the long cold spring, and the prevalency of east and north-easterly winds. A cottager told me, a few days since, that from twenty-eight stocks which he had kept through the winter he had only eight swarms; that from his strongest stocks he had obtained a few small boxes of honey, but that the weak ones had done nothing, and were even in a worse condition than in the spring.

NEW QUEEN.—Under this head, in my June paper, I mentioned a queen having been brought out of one of my stocks in April, and the hope, and pretty well the certainty, that a new one was made; however, was it so or not, the stock soon became inactive and very much reduced in numbers; was ultimately attacked by robbers, which they joined on bringing away their little store. The combs being very good, and a small portion of honey left on them, I put a late swarm into the hive which appears to be doing pretty well.

SHADING.—Should the present month prove hot it will be well to screen the swarms of the present year from the intense heat of the sun, or the combs, being new and tender, may be melted by it; where this unfortunately happens the stock is usually destroyed.

DRONE-KILLING.—This operation is late this year, which induces me to hope that honey gathering is not quite over; should we have a few weeks warm, dry weather after these delightful rains, perhaps, a little more may be done.

ROBBERS.—Late swarms and stocks that are weak must be closely watched, and if the least appearance of robbing discovers itself, the entrance to the hive must be closed so as to admit but one bee at a time.

RULE FOR EXHIBITING GOSLINGS.

"Alas! what bothers do increase
Around his head who shows young geese."—Hudibras.

Not satisfied with having been a not unsuccessful exhibitor of poultry, I must needs, for my sins, dabble a little in the Goose line; and a very pretty kettle of fish I have made of it.

I venture to pour my sorrows into your sympathising ear, partly from the wish that my fate may tend to keep other ambitious exhibitors from the Slough of Despond—into which I find *I have gone and put my foot*,—and partly because I am not without a hope that Poultry Committees, who may hear my case, may be induced to make such changes in the classification of their Prize-Lists as may prevent future disappointment on one side or annoyance on the other.

In the early summer of 1854, I encountered, in a farm-yard in the north of England, some of the finest Goslings I had ever seen. A bargain was soon struck; and after a jury of (Goose) matrons had sat on the sexes of the birds,

I found myself the happy possessor of (so called) a Gander and three Geese. They grew and prospered: were again examined by a competent judge, who confirmed the previous award as to sex; and at a large show, in January, 1855 (being about eight months old), competed in the class "Gander and Two Geese," with old birds, and were awarded first prize by two competent judges, Messrs. Baily and Hewitt. They were claimed, to my sorrow; and I heard no more of them till the following June, when a complaint was made "that they were Ganders." I at once said, "That though too long a time had been allowed to elapse before any complaint was made, I was willing either to allow their present owner to select from my best Goslings of 1855, or to leave the decision as to what I ought to do in the matter, to the committee, or the judges. In short, I would do whatever a gentleman *should* do under the circumstances." I made this offer through one of the Committee, from whom I have not since heard; but a few days ago I received a lawyer's letter, to say that, unless I immediately sent him even a larger sum of money than I had received from the committee, legal proceedings would be adopted. My answer is, "That he knows I *can* have no fear of such a threat; that I am in the hands of the committee, and will act by their decision, without any regard to any threat of legal proceedings."

I make no comment on this matter beyond this, that great allowance must be made for the disappointment of a purchaser, who has seen the spring pass without any proceeds from his highly-priced (and prized) prize-pen; and I do not think either that I am to blame in the matter, for I did not breed those Goslings, but bought them; and I cannot think that I have any claim on my north-country farmer friend, whose answer to my complaint would be, "Why did you not find fault before?"

I believe everybody will allow the difficulty of judging the sex of young Geese. The best judges are at fault. After their second spring there *can* be no mistake about it. But I would suggest that if, as with poultry, there were two classes for Geese, "For a Gander and two Geese more than a year old," and "For three Goslings under a year old," any claimant of a Gosling pen would be aware of the risk he ran in buying them.

But (putting my own case on one side) I would ask you whether a rule, naming a *time* after which no complaint about claimed birds *could* be made, would not be a fair thing to all parties?

This would more particularly attach to young Geese, about the sexes of which I have known several errors made in my own yard as well as in those of others. As it is very desirable to prevent wrangles and heart-burnings about poultry shows, I trust that you will give this letter a place in your journal, and encourage the adoption of my suggestion, or any other which you or others may think better calculated to gain the end I have in view—that of ensuring friendly feeling in, and the avoidance of disputes *from*, every poultry show.

GALLUS.

[We quite agree with our correspondent in thinking that the prizes for Goslings should be for pens of them regardless of sex. This would remove any ground for complaint on the part of disappointed purchasers, and save exhibitors from the annoyance to which "Gallus" has been subjected. This would be a much safer course than attempting to limit the time after which no complaint about being claimed at exhibitions shall be permitted.—ED. C. G.]

GRANT THORBURN,

THE NEW YORK SEEDSMAN.

It was somewhere about the year 1833 or 1834, that we met, in Edinburgh, a *wee wee man*, about four feet ten inches high, clothed in a very long garments, the skirts of which reached to his ancles, and with a very low-crowned and very broad-brimmed hat upon his head. His feet, like the brim of his hat, were out of all proportion to his body, for they were very large and very long; but beneath that broad brim there shone a beaming countenance, full of intelligence, benignity, and playful humour. It needed not to have his

name announced, for the world had been made familiar with his portrait through *Fraser's Magazine*, and we had no difficulty in at once recognising the living image of GRANT THORBURN. How different the circumstances under which he trod his native soil then, to what they were forty years before! He was born at a little village near Dalkeith, N. B., and was brought up to the trade of a nailer; but on the breaking out of the first French Revolution, he joined the ranks of that party in this country which was known as "the Friends of the People," some of whom, in their endeavours for that liberty which we in the present day now enjoy, terminated their lives on the scaffold, while many suffered expatriation. This "*wee wee man*" was one of those who struck terror into the British Government, and he had his choice, along with others, either to expatriate himself, or to have a free passage granted him at the expense of the government. He chose the former, and in 1794 set sail for New York. The account of his arrival we extract from an interesting work entitled "*Flowers from the Garden of Lawrie Todd*," Mr. Thorburn being the original from whom Galt took his character of *Lawrie Todd*; and we rejoice to say he still lives in the enjoyment of excellent health, at the ripe old age of eighty-three.

"When we sailed from Scotland the mountains were covered with snow; when we dropped anchor opposite the old Fly Market, foot of Maiden Lane, June 19, 1794, the small ferry-boats were passing, filled to the gunwale with baskets of cherries. I thought I had dropped into a *New World*, indeed. It was on a Monday morning, 10 A.M.; the sun shone bright. A passenger ship was a rare occurrence at that time, and as soon as we dropped anchor, the ship was surrounded with small boats, filled with people inquiring for letters, friends, and servants. I asked one of the gentlemen if there were any nail-makers in New York.

"'No,' said he; 'they have just got up a machine for cutting nails from iron hoops.'

"Here was a death-blow to my hopes at once. Clothing excepted, my stock in trade consisted only of my nail-hammer in my clothes-chest, and an English sixpence in my pocket. The captain and crew went on shore in the boat, as likewise did all the passengers, I only excepted; and not having any money to spend, I thought I might as well stay where I was. On the passage, having nothing wherewith to kill time, I was in the habit of assisting the steward, and thereby came in for a portion of *cabin fare*; thus I lived as well by paying six guineas in the steerage, as those who paid fifty in the cabin. The captain returned on board, bringing with him a fine piece of beef, which he ordered to be cooked for dinner. While I sat on the deck, helping to get ready the vegetables, a boat came alongside, from which three gentlemen stepped on board. One asked for a servant-girl, another for a ploughman, and the third if there were any nail-makers on board. This, to me, was like life from the dead. I readily answered, 'I am a nail-maker, Sir.'

"I sat flat on the deck, with a large dish between my knees, peeling potatoes.

"'What,' said he, looking down, 'can you make nails?'

"I was piqued at this question, and answered briskly, 'I will wager sixpence (all my stock) that I would make more nails in a day than any man in the country.'

"The speaker, and the manner, set the gentleman in a roar of laughter. However, he gave me his card, and I went to work for him in twenty-four hours thereafter.

"At this time the City Hotel was building, in Broadway. That was the first house covered with slates in America; shingles and tiles were the only covering prior to this. When they were ready to put on the slates, they could not find nails, nor any one who could make them, for nails were not in fashion, and American nailers knew not how to make slate nails: they came to me, and I made them. I now thought I was of some consequence in the world, and that I might make myself useful in this wooden country. About twenty-five years thereafter, in passing the hotel, I saw them removing the slates to put on a new roof. I went up and gathered a handful of my nails, and now have them in my house. Next November (1845), it will be fifty years since those nails were made. At this time, also, the steeple of St. Paul's Chapel was being erected.

"The first night I slept on shore was at No. 8, Dutch-street, in an old frame building with a shingle roof; the weather

was very hot, and I slept in a garret with the window open. * * * When I arose, not wishing to disturb the family at three o'clock, I thought to while away the time by opening my large case of books. They had been three months in the hold of the vessel, and I thought they might be mildewed. Having uncovered the case, on the top of the pile lay a small pocket Bible in two volumes.* It was placed there by my father; my mother I never knew. I opened the book to see if it had sustained any damage on the three month's voyage; my eyes fell on the words "*My Son*;" I was thinking of my father. I read on with delight; having finished the last verse, I found I had been reading the last chapter of the Proverbs of Solomon. I read it again. Now, gentle reader, get a Bible and read this chapter; then suppose yourself in my situation, sore in body, sick at heart, and commencing life among a world of strangers, and say if more suitable could be put together to fit my case. You may think as you please, but I looked upon it as a chart from Heaven, directing my course among the rocks, shoals, and storms of life. Its immediate effect was to raise my hopes, drive away my fears, and add strength to my soul; my sick head and sore bones were cured by the impression; I went forth with a light heart to work my way through the world, resolving to keep this chapter as a pilot by my side.

"On the following Sabbath morning some young men of our passengers called at my lodgings.

"Where are you going to-day?" said they.

"To Church," said I.

"Oh!" said they, "let us go to Long Island, and take a stroll in the fields. Our health requires exercise after being so long on ship-board."

"You may go where you please," said I, "but I go to Church. The last words my father spoke, as we parted on the shores of Scotland, were, 'Remember the Sabbath day!' I have not so soon forgotten his words."

"They went to the fields, I went to Church; they spent a few shillings, I put a penny in the plate.† Some of them earned nine or ten dollars a week; I only received five-and-a-half. They would get a light waggon, drive off with some young ladies, spend five or six dollars, get caught in a thunder-shower—fine clothes and hats all spoiled—come home half-drunk, rise at eight o'clock on Monday morning with aching bones, sore heads, downcast looks, and guilty conscience. I went to Church, rose at five o'clock on Monday morning with a sound head, bones and body refreshed and rested, entered the labours of the week with a clear head and quiet conscience. At the end of the year they had fine clothes, fine hats and powdered heads, but I had a hundred hard dollars in the corner of my trunk. They, having lived fast, all died young; while I, in consequence of my regular living, have not been confined a day by sickness in fifty years."

(To be continued.)

LOUTH FLOWER SHOW.

THE Second Show of the season of the Louth Floral and Horticultural Society took place on Friday the 13th inst. It has hitherto been held in the Corn Exchange, which building, although well adapted by its construction for a display of flowers, and large enough for all ordinary purposes, was generally found too small for the convenience and comfort of visitors. By the kindness of the mayor (J. B. Sharpley, Esq.) the large room of the New Town-hall was lent to the committee, and, large as it was, it was not at all too large for the occasion. The day was beautifully fine, and the company numerous and gay; in fact, the elite of the town, neighbourhood, and country were present. The exhibition was truly first-rate and extensive, and a view of the whole scene from the light and airy gallery was thoroughly enchanting. The harmonium, together with a

* When a son leaves the paternal roof for the first time, it is usual, in Scotland, for his mother to place a Bible on the top of the contents of his trunk, so that when he arrives at his destination this is the first article he meets with on opening it.

† In accordance with a custom in the Scotch Churches, where a plate is always placed at the door on the Sabbath to receive the free-will offerings of the congregation.

select band of music, lent their aid to enhance the pleasure of the company. Some disappointment was experienced at the unaccountable absence of the judge (Mr. Gibbs, head gardener to the Earl of Yarborough); but it has since transpired that the noble Earl was seriously attacked with paralysis, which may have prevented the presence of his gardener. However, it happened fortunately that Mr. Crowder, of Horncastle, nurseryman and florist, together with his assistant, were in the town, and the committee deemed it advisable at once to secure their services. We believe they acquitted themselves generally to the satisfaction of the exhibitors. Great credit is due to the secretaries, Messrs. R. Cooper and T. F. Allison, for their indefatigable exertions and affable demeanour. The charge for admission to non-subscribers was 1s., but a large number availed themselves of the opportunity of *entree* at 3 o'clock, by payment of 3d.—The following is a list of the prizes awarded:—

Best 3 greenhouse plants, Rev. W. Smyth; 2nd do., Lady Albinia A. Pye. Best 2 achimenes, Mr. E. Locock. Best 3 balsams, Mrs. F. Chaplin; 2nd do., Mr. Locock. Best 6 calceolarias, Rev. James Garvey; 2nd do., Rev. J. Walls. Best 6 fuchsias, Miss F. Lister; 2nd do., Lady A. A. Pye: best 3 fuchsias (amateurs only), Mr. H. Boothby jun.; 2nd do., Rev. J. Garvey. Best 2 ferns, Mr. Locock; 2nd do., Rev. W. Smyth. Best 6 petunias, Mr. Boothby; 2nd do., Mr. Boothby: best 3 petunias (amateurs), Mr. L. R. Lucas; 2nd do., Mr. Boothby. Best 6 pelargoniums, Rev. J. Walls: best 3 do., Rev. J. D. Waite; 2nd do., Mr. Lucas. Best 3 scarlet pelargoniums, Lady Pye; 2nd do., Rev. W. Smyth. Best 3 roses (in pots), Mr. Lucas. Best 6 verbenas, Mr. Lucas; 2nd do., Rev. W. Smyth: best 3 verbenas (amateurs), Mr. Lucas; 2nd do., Mr. Lucas. Best stove plant, Rev. W. Smyth. Best heath, Mrs. Chaplin. Best fuchsia, Miss F. Lister. Best calceolaria, Rev. J. Walls. Best seedling (a phlox Drummondii), Mr. H. Boothby.

Cut Flowers.—Best 6 antirrhinums, Mrs. F. Chaplin; 2nd do., Mr. H. Boothby. Best 6 calceolarias, Rev. J. Garvey; 2nd do., Rev. W. Smyth. Best 24 roses (in trusses as grown), Rev. J. Garvey; 2nd do., Mr. H. Falkner: 12 roses, Rev. J. Garvey; 2nd do., Rev. J. Walls: best 6 do., (amateurs), Rev. J. Garvey; 2nd do., Mr. Falkner: best 3 do., Mrs. Chaplin; 2nd do., Rev. W. Smyth. Best 12 verbenas, no award; 2nd do., Rev. J. Garvey: 6 do., Mr. Lucas; 2nd do., Miss F. Lister. Best collection of hardy flowers, Rev. J. Garvey; 2nd do., Capt. Fox. Best collection of greenhouse and stove do., Rev. J. D. Waite. Best hand bouquet, Rev. J. Walls; 2nd do., Rev. J. Garvey. Best collection of wild flowers, Miss Mason; 2nd do., Miss Wood; 3rd do., Mr. H. Allison.

Fruits.—Best 6 table apples, Mr. W. G. Allison. Best 1lb. cherries, Mr. Locock; 2nd do., Miss Lister. Best 1lb. black currants, Rev. J. Walls. Best 1lb. gooseberries, Mr. H. Smyth; 2nd do., Mr. Locock. Best melon, Rev. W. Smyth; 2nd do., Rev. W. Smyth. Best dish of strawberries, Rev. W. Smyth; 2nd do., Mr. Locock. Best vine (bearing fruit), Mr. T. P. Waite. Best peach tree, Mr. T. P. Waite; 2nd do., Rev. W. Smyth: best fig do., Mr. T. P. Waite: best plum do., Mr. H. Smyth.

Vegetables.—Best 25 Windsor beans, Miss F. Lister; 2nd do., Mr. Locock. Best 6 artichokes, Lord Fred. Beauclerk; 2nd do., Mr. Locock. Best 25 hardy asparagus, Rev. G. W. Murray; 2nd do., Lord Beauclerk. Best 2 carrots, Rev. W. Smyth; 2nd do., Mr. Locock. Best 2 cabbages, Miss Mason; 2nd do., Miss Mason. Best 2 cauliflowers, Rev. W. Smyth; 2nd do., Rev. J. Walls. Best 3 heads of celery, Rev. J. Walls. Best 2 cucumbers, Rev. W. Smyth; 2nd do., Mrs. Chaplin. Best 2 cos lettuces, Rev. W. Smyth; 2nd do., Mr. W. G. Allison: best 2 cabbage lettuce, Rev. J. Walls; 2nd do., Mr. Allison. Best 6 onions, Miss F. Lister; 2nd do., Rev. W. Smyth. Best root of parsley, Mr. W. G. Allison; 2nd do., Rev. J. Walls. Best 25 pods of peas, Mr. Locock; 2nd do., Mr. Falkner: best 12 marrow do., Rev. J. Walls; 2nd do., Mrs. Chaplin. Best 12 kidney potatoes, Mr. Falkner; 2nd do., Miss Lister: best round do., Miss Lister; 2nd do., Rev. W. Smyth. Best rhubarb, Capt. Fox; 2nd do., Rev. W. Smyth. Best turnips, Rev. W. Smyth; 2nd do., Mr. Locock. Best basket of salad, Lord Beauclerk; 2nd do., Rev. W. Smyth. Best basket of vegetables, Rev. G. W. Murray.

The cottagers' table was well supplied with vegetables; and

Mr. Crowder, of Horncastle, and Mr. Mitchell, of Louth, exhibited stands of plants for sale. The show of roses was really splendid, as was also the antirrhinums, in which there was much competition; and the judge must have found it no easy matter to make his awards. The collection of seedling petunias (including a large light-coloured double one), raised by Mr. H. Boothby, attracted much attention, and was deservedly admired. Mr. Lucas showed some very beautiful ones; and Mr. Waite's geraniums were admired, as they always have been.

DERIVATION OF NEMOPHILA.

As your correspondent will not even "comply" against his will, but remain of the same opinion still, permit me, at any rate, to endeavour to remove one or two difficulties that seem to be in his way.

First, he will find the word in Homer's Iliad, A 480, *εν νεμει σκιερω*. This passage is quoted by Stephens under the word *νεμος*; and the interpretation of Hesychius given *συνδενδρος τοπος και νομην εχων* locus arboribus densus et pascuus.

Secondly, the question raised in your correspondent's first letter was more as to the matter-of-fact "how was the name first spelt by the inventor," than as to its classical correctness; and of that there is no shadow of doubt. It was first spelt *Nemophila*, and is so still by all botanical authorities.

Thirdly, as to the correctness of the form of the word, there is little doubt that the best Greek authors would have written it *φιλονεμος*, like *φιλοσοφος*, or *φιλόγλυκος*, or *φιλέλλην*. But the late writers might form it as Nuttall did, after the analogy of *θεοφιλος* or *θεοφιλης*; or, more closely still, *Παμφιλη*, a name well known to all readers of Terence.

Your correspondent's notions of the correct form being *Nemophilon*, are, I think, quite erroneous; and I cannot help thinking that he would confer a favour on all grammarians if he would inform them what is his authority for the "third person, irregular number" of a participle.—D. B.

QUERIES AND ANSWERS.

GARDENING.

ROSES AND CLIMBERS FOR A WALL.

"I should feel obliged to you, or any of you correspondents, to give me a list of *Roses* the best suited for a wall, one side of which is due south, the other east; or any other climber that would do well in such a situation.—M. M."

[*Jaune Desprez*, *Lamark*, *Solfaterre*, and white and yellow *Banksian*, are the best *Roses* for such a wall, as they flower all through the autumn, except the *Banksians*. For a summer *Rose*, none are better than *Blairii* No 2, *Spiraea Lindleyana* is a fine climber for a east or west wall. *Ceanothus azureus* for a south wall. *Tecoma radicans major*, and *Wistaria sinensis*, are two good old wall plants. Then the *Magnolia grandiflora* for the largest leaf, and *Cotoneaster microphylla* for the smallest leaf, are all suitable for good walls.]

PRINCIPLES TO REGULATE THE STRIKING OF CUTTINGS.

"In a back number of THE COTTAGE GARDENER, which I cannot just now lay my hands upon, Mr. Beaton comments upon the impossibility, or next to it, of an amateur managing to strike cuttings in a hotbed, or under a glass; and as I am a constant reader and subscriber, I shall feel extremely obliged by your stating what those difficulties are (the principles). I am about to commence striking some cuttings, and am always wide awake to learn. I am a lover of gardening, though only an amateur. What I understand of the principles of striking cuttings on a hotbed are—1st. The relative proportions of top and bottom-heat. 2nd. Due

proportion of humidity in the surrounding medium. 3rd. When glasses are used, to surround the glass with such a state of heated air that will keep the moisture inside from condensing on the glass, and by that means robbing the internal air of its moisture. Are these the means, with slight, but proper waterings, that will commonly lead to successful results?—R. S."

[There can be no question as to the correctness of the principles you mention. Follow them out practically, and there need be no complaint; but a little slip in practical detail soon runs riot with a principle.]

SYNONYMES OF PLANTS.

"Mr. G. S. WINTLE would feel obliged by any information that could be given, through the medium of THE COTTAGE GARDENER, as to the native country and date of introduction of the following plants:—

"1. *Philodendron pertusum*. 2. *Pandanus javanicus variegatus*. 3. *Ananassa variegata*. 4. *Dracena maculata*. 5. *Caladium rubricaulis*. 6. *Dieffenbachia maculata*. 7. *Brunfelsia squamosa*. 8. *Maranta zebrina*. *M. rosea lineata*. 9. *Rhopala corcorvadensis*. 10. *R. magnifica*. 11. *R. complicata*. 12. *Maranta Warscewiczii*. 13. *Berberis nepalensis*."

[1. *Philodendron pertusum*, is an unauthorised nursery name for *Scindapsus pertusus*, or *Pothos pertusa* of old authors. It is a native of the East Indies, and was introduced to Kew some years back. 2. *Pandanus javanicus variegatus*, is also a trade name without authority; it has probably been received from Java, not long since, into some continental collection, where dog latin and contempt for botanical authority are propagated as freely as Pansies for the English market, to gull the natives; it is one of the best variegated plants, nevertheless. 3. *Ananassa variegata*, is simply the common fruiting Pine-Apple plant, a garden sport, we believe, of which there are two or three forms. 4. *Dracena maculata*, of the nurseries, is the white-spotted-leaved form of *Cordyline Sieboldii*, and was named by Planchon, a little man who does the botany for the Flore des Serres at Ghent. This well-marked *Cordyline* (the accent is on the i) is a native of Java, whence it was introduced six or seven years since. 5. *Caladium rubricaulis*, is a nursery name for some species of *Acontias*. 6. *Dieffenbachia maculata*, is a variegated form of the acrid Dumb Cane of the West Indies; *Dieffenbachia seguina*, alias *Arum sequinum*, and alias *Caladium sequinum*. 7. *Brunfelsia squamosa*, is unauthorised, as far as we know. 8. *Maranta zebrina* is *Calathea zebrina*, a native of Brazil; and *Maranta rosea lineata*, is so named by Sir W. Hooker; a pretty, well-marked, stemless plant, from Brazil; the rosy lines are in the leaves, the flowers of all *Marantas* being of little account. 12. *Maranta Warscewiczii*, is another well-marked kind, recently from central America; the leaf is deep purple below, green above, and marbled along the mid-rib. 9. *Rhopala corcorvadensis*, from the Corcorvado Mount on the west of Rio de Janeiro, whence the kinds have been brought to continental gardens, and whence they find their way to this country with sounding names which are made in ignorance, or on purpose, with a view to deceive: yet they are beautiful plants, on account of their fine leaves or modes of growth. 13. *Berberis Nepalensis*, was introduced by the East India Company, in 1847, and raised in the garden of the Horticultural Society. It is one of the evergreen kinds which went by the name of *Mahonia*.]

UNPRODUCTIVE SWAN.

"A. M. S. has two Swans, the male about two or three years older than the female, which is, perhaps, six years old. The female has chosen her own site for a nest at the side of a pond in a retired situation, perhaps a little too damp. She has laid and sat upon her eggs for two successive years, but there have been no cygnets, and every egg has been rotten."

[I should recommend, in this case, that the male swan be exchanged for another bird, as I have but little doubt that the sterile character of the eggs depends on the male bird.]

I have known instances where the eggs of five or six ducks were all sterile, but on exchanging the drake they hatched without difficulty. The dampness of the ground is certainly not the cause of the want of success.—W. B. T.]

PLANTING AN ISLAND.

"I want to plant an Island with evergreens. Will you inform me what are the best? I have tried the common Laurel, but it is too damp for them.—A SUBSCRIBER."

[If the island is really too wet for the common Laurel no other evergreen will have a chance on it. In such a case, the next scheme should be to establish a thick plantation of Alders, Poplars, and Willows, and then to undercover with Laurels, Privets, and a few common Rhododendrons. Do any of our readers know of a better plan from actual experience?]

MANAGEMENT OF AN ORCHARD-HOUSE.

"In your COTTAGE GARDENER of 19th of June, there is an interesting article, by Mr. Beaton, of the Meeting, on the 5th of June, in Regent-street.

"He states that the old Rose-house of the Horticultural Society has been turned into an Orchard-house, and the Peaches and Nectarines in pots are covered from top to bottom with fruit. It would be doing myself, and, I believe, many other amateurs, a great favour, if Mr. Beaton would give Mr. Gordon's experience in the kind of culture so new here.

"After all Mr. Rivers has said on the subject, I am afraid I am not managing my pots properly, especially in pinching, and disbudding, and pruning my Peaches, Nectarines, and Apricots.

"My trees are running up too much; and, although eighteen months potted, I have scarcely any fruit.—A REGULAR SUBSCRIBER."

[Mr. Gordon first of all went down to Mr. Rivers, and saw with his own eyes what was done there in the Orchard-houses; and, being a good gardener, he hit upon the exact treatment at once. The great art of growing fruit-trees in pots seems to be to keep the plants very thin, or bare of wood. Most amateurs would think their pot-trees were ruined if they were such skeletons as Mr. Gordon's trees are at this moment; those which were exhibited on the 11th, at Chiswick, were equally thin of wood. One thing is certain; and that is, that these pot-bushes do not fruit so well the first year from the growers as they do after a season of superior management at home.

If we had an Orchard-house, we should insist on having every Peach, Nectarine, and Apricot on its own roots, and we should plant "stones" of each kind on purpose for pot plants from the seed. Many of the seedlings might be good for nothing, but some of them would be so good on their own roots as to bear such rough gardening as would kill worked plants. Mr. Rivers' Treatise on Orchard-house Culture is of the very best kind; we could not add a word more to it, save the above.]

LONDON MARKETS.—JULY 30TH.

THE late heavy rains have all but finished the Strawberry crops; but there is still a pretty good supply of *Eltons*. Cherries continue to be very abundant, particularly *Bigarreaus*, *Black Hearts*, and *Kentish*. Peaches, Nectarines, and Pines, are very plentiful; and there is also a good supply of foreign Apricots. Tomatoes and Egg Plants, from the south of France, are also to be had of large size and in good condition. There is still a very abundant supply of West India Pines; and home-grown Grapes are plentiful at reasonable prices. The Vegetables are very plentiful, and, indeed, there is no lack of garden produce of any kind. Cut Flowers and Flowers in Pots are also in great quantities, and consist of *Heliotropes*, *Fuchsias*, *Pinks*, *Carnations*, *Calceolarias*, *Heaths*, *Humea elegans*, and *Roses*.

COVENT GARDEN.

FRUIT.		SCARLET RUNNERS	
Apples, kitchen,	per bushel — to —	Carrots, bunch ..	4d. „ 6d.
„ dessert, doz.	— „ —	Parsnips	— „ —
Pears	— „ —	Beet, per doz.	1s. „ 1s. 6d.
Apricots, per doz.	2s. „ 2s. 6d.	Potatoes, per cwt.	10s. „ 20s.
Peaches, per doz.	8s. „ 15s.	Turnips, bunch ..	2d. „ 6d.
Nectarines, doz.	8s. „ 15s.	Onions, young,	
Cherries, lb.	2d. „ 6d.	bunch	1d. „ 2d.
Plums	— „ —	Leeks, per bunch	2d. „ 3d.
Pine-apples, lb.	3s. „ 6s.	Garlic, per lb. ..	6d. „ 8d.
Grapes, lb.	3s. „ 6s.	Shallots, per lb.	4d. „ 6d.
Melons, each	2s. „ 6s.	Horseradish, per	
Figs	— „ —	bundle ..	1s. 6d. to 2s. 6d.
Gooseberries, per		Lettuce, Cos, per	
quart	2d. „ 4d.	score	6d. „ 1s.
Currants	4d. „ 6d.	„ Cabbage	6d. „ 8d.
Raspberries	6d. „ 9d.	Endive, per score	1s. „ 1s. 6d.
Strawberries, per		Celery, per bun.	8d. „ 1s.
pottle	4d. „ 6d.	Radishes, Turnip	
Oranges, per 100	4s. „ 10s.	per doz. bunches	1s. „ 2s.
Lemons, doz.	1s. to 1s. 6d.	Water Cresses, per	
Almonds, per lb. ..	2s. „ —	doz. bunches ..	6d. „ 9d.
Nuts, Filberts, lb. —	— „ —	Small Salad, per	
„ Cobs, lb.	— „ —	punnet	2d. „ 3d.
„ Barcelona,		Artichokes, each	.... 8d.
per bushel	20s. „ 22s.	Asparagus, per	
„ Brazil, per		bundle	1s. 6d. „ 4s.
bushel	12s. „ 14s.	Sea-kale, per pun.	— „ —
Chestnuts	— „ —	Rhubarb, per bdl.	2d. „ 6d.
VEGETABLES.		Cucumbers, each	3d. „ 8d.
Cabbages, per doz.	9d. to 1s.	Vegetable Marrow	2d. „ 3d.
„ Red, per doz.	2s. „ 4s.	Tomatoes	— „ —
Cauliflowers, doz.	2s. „ 3s.	Mushrooms, per	
Brocoli	— „ —	pottle	8d. „ 1s.
Savoys	— „ —	HERBS.	
Greens	— „ —	Basil, per bunch	6d. to 9d.
Spinach, per sieve	1s. „ 2s.	Marjoram, per	
Peas, per half sieve		bunch	6d. „ 9d.
1s. 6d. „ 2s. 6d.		Fennel, per bunch	2d. „ 3d.
Beans	— „ —	Savory, per bunch	2d. to 3d.
French Beans, per		Thyme, per bunch	2d. „ 3d.
quart	3d. „ 4d.	Parsley, per bunch	2d. „ 3d.
		Mint, per bunch	4d. „ 6d.

POTATOES.

Regent's, York,	per ton 160s. to 195s.	Regent's, Scotch,	per ton 125s. to 150s.
„ Kent and		Scotch Reds ..	120s. „ 140s.
Essex	140s. „ 180s.	„ Blues	95s. „ 130s.
„ Lincoln	120s. „ 180s.		

GRAIN AND SEED.

WHEAT.		PEAS.	
Kent and Essex,		Boiling, per qr.	42s. to 47s.
red, per qr.	70s. to 77s.	Common	36s. „ 38s.
Ditto, white	76s. „ 84s.	Grey	37s. „ 40s.
Norfolk and Suf-		Maple	40s. „ 42s.
folk	71s. „ 76s.	SEEDS.	
Dantzic	84s. „ 92s.	Turnip, White, per	
Rostock	80s. „ 90s.	bush.	— to —
Odessa	70s. „ 78s.	Swede	— „ —
American	82s. „ 86s.	Rape	84s. „ 86s.
BARLEY.		Linseed, sowing	74s. „ 76s.
Malting	36s. to 38s.	„ crushing	70s. „ 73s.
Grinding and		Clover, English,	
Distilling	31s. „ 33s.	red	60s. „ 68s.
Chevalier	34s. „ 36s.	„ Foreign do.	52s. „ 57s.
OATS.		„ White	68s. „ 73s.
Scotch, feed ..	32s. to 33s.	Trefoil	28s. „ 32s.
English	27s. „ 31s.	Rye	40s. „ 43s.
Irish	26s. „ 29s.	Tares	— „ —
Dutch Broo ..	30s. „ 31s.	Canary	50s. „ 54s.
Danish	28s. „ 30s.	Hemp	50s. „ 53s.
Russian	27s. „ 31s.	LINSEED CAKE, per	
BEANS.		ton	£12 to £12 10s.
Harrow	41s. to 43s.	Rape Cake	£6 10s. „ £6 15s.
Pigeon	42s. „ 48s.	Indian Corn ..	47s. „ 50s.
Tick	40s. „ 42s.		

HOPS.

Mid & E. Kent £14 to £18	Weald of Kent
	£10 10s. to £11 10s.
Sussex....	£10 to £10 10s.

HAY AND STRAW.

Clover, 1st cut per load	110s. to 147s.	Meadow Hay, new 95s. to 105s.
Ditto, 2nd cut	90s. „ 130s.	Rowan
Meadow Hay ..	90s. „ 135s.	Straw, flail
		Ditto, machine

MEAT.

Beef, inferior, per 8 lbs. ..	3s. 4d. to 3s. 6d.	Mutton, mid. 3s. 10d. to 4s. 4d.
Do. mid.	3s. 8d. to 3s. 10d.	Do. prime 4s. 6d. to 4s. 10d.
Do. prime	4s. to 4s. 2d.	Veal
Mutton, inferior....	3s. 4d. to 3s. 8d.	Lamb
		Pork, large 3s. 8d. to 4s. 0d.
		Ditto, small 4s. 0d. to 4s. 6d.

POULTRY.

Goslings	5s. to 6s. 6d.	Ducklings 2s. 0d. to 3s. 0d.
Fowls	3s. „ 4s.	Pigeons ..
Capons ..	3s. 6d. „ 4s. 6d.	Rabbits ..
Chicken ..	2s. 0d. „ 3s. 0d.	

PROVISIONS.

BUTTER.—Cwt.	CHEESE.—Cwt.
Dorset, fine .. 98s. to 102s.	Cheshire, fine .. 70s. to 84s.
Do. middling .. 80s. „ 86s.	Gloucestershire,
Fresh, per doz.	double 68s. „ 74s.
lbs. 8s. „ 12s.	Ditto, single.... 56s. „ 70s.
Friesland 100s. „ 104s.	Somerset 70s. „ 84s.
Kiel 96s. „ 100s.	Wilts, loaf 68s. „ 78s.
Carlow 94s. „ 98s.	Ditto, double .. 72s. „ 78s.
Waterford 90s. „ 94s.	Ditto, thin 54s. „ 64s.
Cork 84s. „ 98s.	Ditto, pines 72s. „ —
Limerick 86s. „ 98s.	Berkeley, thin .. 62s. „ 66s.
Sligo — „ —	

BACON.—Cwt.		HAMS.—Cwt.	
Wiltshire, dried	78s. to 80s.	York, new	80s. to 90s.
Waterford	72s. „ 74s.	Westmoreland..	76s. „ 86s.
		Irish.....	74s. „ 84s.

WOOL.

Down Tegs 1s. ½d. to 1s. 1½d.	Leicester,
Ditto Tegs and	fleeces .. 11½d. „ 1s. 0d.
Ewes 11d. „ 1s. ½d.	Long, heavy do. 11d. „ 1s.
Half-bred Hog-	Combing skins 10½d. „ 1s. 1d.
gets 11½d. „ 1s. 1d.	Flannel wool 1s. 1d. „ 1s. 2½d.
Do. Wethers 11d. „ 1s.	Blanket wool 8½d. „ 1s. 0½d.
Kent Fleeces 1s. ½d. „ 1s. 1d.	

TO CORRESPONDENTS.

SALSAFY (H. B.).—It is a very old kitchen vegetable. You will find full directions for its culture in *The Cottage Gardeners' Dictionary*. It should be sown in drills nine inches apart during March and April, in trenched light soil, and treated exactly like the Carrot. Its root is boiled and eaten like that vegetable.

DIELYTRA SPECTABILIS (E. H. C.).—Mr. Beaton is much obliged by the gift of the seed.

SCYTHES (B.).—We always employ Boyd's, and can testify to their excellence, and saving of time.

GRUB ON PEAR-LEAVES (An Old Subscriber, Wells).—It is the Slimy Grub, which is the larva of a fly, *Selandria ethiops*. A drawing and particulars are given in our third volume, page 69, and tenth volume, page 392. Repeated dusting with quicklime is the best remedy we know.

DISEASED RUMP-GLAND IN DOVES (A Constant Reader).—Your treatment was quite correct. It is the same disease that affects poultry. Hempseed is too stimulating for their permanent and exclusive diet. Give them the seed of Tares or Vetches, and some green food, such as young cabbage-leaves shredded fine. Give them also a little finely-powdered chalk, as well as gravel, and a little salt.

BUILDING A GREENHOUSE, &c. (A Subscriber).—All your questions have been answered by Mr. Fish in his various and numerous papers on the subject. Pray refer to our Indices. Mr. Beaton has been unable to carry out his experiments on the arrangements of flowers owing to retiring from his head-gardenship. *Compactum Geranium* would flower more freely than *Shrubland Scarlet*. Mr. Beaton will write upon the subject you name. The *Helen Verbena* ought to be sold at about four shillings per dozen. Norfolk nurserymen and florists are most

likely to have it. When correspondents ask so many and such different questions in the same letter we are obliged to give short answers, for we cannot divide the labour.

GOLDEN PHEASANT CHICKEN.—Ellen, and some other subscribers, wish for information on rearing these. They complain of the chickens moping, seeming to have something in their throats, and other bad symptoms. We shall be glad of information from any of our readers who have raised these chicken successfully.

NAMES OF PLANTS (I. K.).—*Hydrangea quercifolia*.—(W.) *Carex acuta*.—(Hortus). *Cladanthus arabicus*.—(Ellen). Your Fern is *Las-trea dilatata*.—(X. Y. Z.) Your Ferns are, 1. *Pteris longifolia*. 2. *Asplenium trichomanes*. 3. *Asplenium Adiantum Nigrum*? 4. *Doodia caudata*. 5. *Aspidium filix-mas*? uncertain. 6. *Cassebeera hastata*. 7. Too young a frond for us to be certain. 8. *Asplenium lucidum*. 9. *Asplenium Brownii*; *allantodia* section. 10. *Pteris serrulata*. 11. *Asplenium marinum*. 12. *Nephrodium molle*. 13. *Lygodium scandens*. 14. *Drynaria quercifolia*. 15. *Adiantum pubescens*. 16. *Aspidium pulchellum*?—(Oscar). Your plant is the *Hydrocotyle vulgaris*, Common Water-cup, White-rot, or Marsh Pennywort. The following may be interesting to the many as well as our correspondent, taken from Baxter's *British Flowering Plants*:—"The whole plant is acrid, and probably, like others of the umbelliferous tribe, growing in wet places, poisonous. This plant has received its English names of White-rot, Flowerwort, Sheep-killing Penny-grass, Sheep's-bane, and Penny-rot, from an old belief that feeding upon it caused the liver rot in sheep. This opinion, which is altogether an error, arose from the Fluke or Flounder insect (*Fasciola hepatica*) being found in marshy grounds where the *Hydrocotyle* and other similar plants abound; but sheep are well known never to eat this plant."

MEALY BUG (A Sufferer).—This will be further referred to. In the meantime, you can do nothing with Vines and Peaches, but just keep the pest down by picking and washing.

MILDEW IN GRAPES (W. H. W.).—Do not lose an hour, but hold a platefull of flower of sulphur under every bunch, and rub each berry between your fingers covered with the sulphur. Sprinkle it, also, over the leaves. Repeat the application if needed.

CALENDAR FOR AUGUST.**FLOWER-GARDEN.**

ANEMONES (common) sow. **ANNUALS**, stick; water; clear from decayed leaves, &c. **AURICULAS**, sift into fresh earth; water; seedlings prick out; sow. **BEDS**, in which bulbous flowers have grown, fill with annuals from pots, to flower through autumn. **BIENNIAL** seedlings transplant. **BULBOUS** rooted flower-seeds, as *bulbous Iris*, &c., to obtain varieties, sow. **BULBOUS** roots remove or transplant; remove and plant offsets; plant. **CARNATION** layers cut from old root and plant; water frequently; layering may still be done, b.; card the flowers, and shade from sun, e. **DAHLIAS**, stake; thin the flowers. **DAISIES** propagate. Put in **CUTTINGS** of all flower-garden *Geraniums* early. **DOUBLE**-blossomed perennials with fibrous roots, as fine double *Larkspurs*, &c., propagate by division, e. **DRESS** borders as required. **EDGINGS** of box, &c., clip in wet weather. **EVERGREENS** may be moved, e. if wet weather; plant cuttings. **GRASS**, mow and roll weekly. **GRASS SEEDS** may be sown, e. **GRAVEL**, weed and roll weekly. **HEDGES**, clip in moist weather, except in laurel and holly hedges. **HELIOTROPES**, put in cuttings under glass in a gentle heat, b. **MIGNONETTE** sow in frame, b. **PELAGONIUMS** propagate by cuttings, b. **PERENNIALS**, in pots and elsewhere, will require water almost daily; cut down flower-stalks as they finish blooming; seedlings transplant. **PIPPINGS** of *Pinks* may be planted out. **POLYANTHUSES**, sow. **PONDS** keep clear of green scum. **POTTED ANNUALS** will require water daily in dry weather. **RANUNCULUSES**, sow; plant in pots to bloom in November. **ROSES**, bud; prune in strong straggling shoots; cuttings of China and Tea-scented varieties plant under hand-glasses. **ROSES** may be budded to the end of September on the Manetti and some Bourbon stocks. September is the best time to bud, unless done at the end of May. **SEEDS**, gather as they ripen. Even those of *Heliotropes* and *Verbenas* will frequently be found to be fertile. **SHRUBBERY**, cut off the bunches of seeds of *Laburnums* and *Lilacs*, &c., to strengthen in the bloom next year; also cut off the seeds of *Rhododendrons*. **SEEDINGS**, to obtain varieties, had better be done in boxes. **TEN-WEEK STOCK**, sow, b. **TULIPS**, and other bulbous-rooted flower-seeds, sow. **TURF** may be laid, e. **VERBENAS**, put in cuttings of new kinds, e. **WATERING** will be required generally in dry weather. **WEEDING**, generally attend to. *Cuttings* of *Penstemons*, *Snapdragons*, double *Lychnis*, and other herbaceous plants, will yet succeed, if planted and shaded under hand-glasses. Of the *China Asters*, mark the finest, and save for seed.

D. BEATON.

FLORISTS' FLOWERS.

AURICULAS and **POLYANTHUSES**, finish potting, b. **CINERARIAS**, take off slips, transplant seedlings, sow, b., for the last time this year. **CARNATIONS** and **PICOTEES**, finish layering, m.; seedlings transplant. **CHRYSANTHEMUMS**, layer those planted out for that purpose; pot off cuttings; give the last potting to all intended for blooming; water most abundantly, and syringe daily. **DAHLIAS**, stake, tie, mulch and water in dry weather; cuttings of new ones may yet be struck. **FUCHSIAS** done blooming place out-of-doors; save seed. **HOLLYHOCKS**, keep well tied to the stakes; cuttings of, put in heat under a frame, shade from sun till rooted. **PANSIES**, save seed of, put in cuttings, b., for the last time this year; transplant seedlings. **PINKS**, cut down old flower-stems; save seed of; transplant pipings already rooted, and also seedlings. **PELAGONIUMS**, cut down; give no water till they break again; put in cuttings; transplant seedlings; pot off cuttings already rooted. **PETUNIAS**, save seed from; transplant seedlings of; pot in cuttings. **RANUNCULUSES**, take up and store without fail; b., or they will begin to grow again. **ROSES** bud, b.; put in cuttings of; save seed

TULIPS, if not all taken up, should be at once. **VERBENAS**, peg down; water freely in dry weather; put in cuttings of good kinds only; save seed. See that all *plants in pots* are duly supplied with water, and keep a constant look out for all kinds of vermin. T. APPLEBY.

GREENHOUSE.

AIR, give plenty night and day, especially during the former. In very hot weather, it is often advisable to keep rather close with a moist atmosphere during the day, even though the sashes should be entirely removed in the evening, to be replaced in the morning. This treatment will apply to *Heaths, Azuleas, Camellias*, &c., that are now making their growth. Those which have set their buds may be removed to a sheltered place, and have no glass protection for a time. **BUDDING**, of all things, finish before the wood gets hard. It may yet be done with *Oranges, Camellias*, &c. **CINERARIAS**, propagate by rooted slips, and transfer the earliest to blooming pots. **PELARGONIUMS**: those done flowering cut down, and now pushing again may have the soil shaken from them, be placed in light soil, and in a close moist pit, to encourage free growth. Until that growth has taken place, however, give little water at the roots. In growing from cuttings, success will greatly depend in never allowing them to stand still, but keeping them constantly, but slowly, growing. Cut down successional plants as they get out of bloom. The fancy kinds, if the points and old flowers are merely removed, will flower again before winter. **GREENHOUSE PLANTS IN GENERAL**, if healthy, and their wood made, will be better out-of-doors in a sheltered place than within; defending the pots from being too much heated in sunshine is even of more importance than shading the tops. **ALL YOUNG STOCK** growing freely, begin to harden by exposure by the end of the month. **POTTING**: finish shifting as soon as possible, that the plants may be feeling the outside of the pots before winter. **CHRYSANTHEMUMS, SALVIAS**, &c., for winter blooming, set in an open place fully exposed to sun and air. The former must not be stopped any more. The latter should alone receive final stopping and shifting. **PROPAGATION**: almost everything may now be successfully propagated. The whole of the **SUCCULENT GERANIUM FAMILY** will do best on a south border. **CLIMBERS**, on the rafters, train when over rampant, but the more natural-looking the better. By-and-by they must be cut in to allow more light to the plants. **GATHER SEEDS** of all desirable things as they ripen. The propagating of half-hardy things, such as *CALCEOLARIAS*, may commence about the end of the month. About the middle of the month, **SOW SEED OF HERBACEOUS KINDS** in a cool pit. **WATERING** will not be wanted quite so much, unless the days are very bright. In such days use the syringe among growing plants freely in the afternoon. **DRESS**, tie, surface earth, and keep all neat and clean. R. FISH.

FRUIT-FORCING DEPARTMENT.

As long as the temperature will permit, admit **AIR** day and night. Allow the **TEMPERATURE** to range, with sun-heat, from 65° to 85°, and during night from 55° to 65°. **FIGS**, water liberally. Give the last shifting, early in the month, to those **PINES** intended for early fruiting next season; let others follow in succession; keep down superfluous suckers; use abundance of atmospheric moisture. Clear ripe **GRAPES** from all diseased and mouldy berries; admit abundance of air. Keep down, or, rather, keep away, the **RED SPIDER**, by lighting a fire on dull days, and brushing the pipes or flues with a thin mixture of sulphur and water. Thin freely the late crops, and water the **VINES** in dry weather with liquid-manure, also use mulchings. Give **PEACH-HOUSES**, from which the fruit has been gathered, copious syringings; and get the wood hardened and ripened before removing the sashes. Regulate and stop the shoots, and set the fruit on **MELON** plants; use manure-water liberally. Strike cuttings, or sow seeds of **CUCUMBERS** intended for a late supply. Encourage the completion of growth of all **PLANTS IN POTS** intended for forcing, and place those fully matured at the back of a north wall. Lay **STRAWBERRIES** in small pots, to be shifted into larger. Turn **BARK BEDS**. **PAINT**, wash. Clear out furnaces, empty and rinse out boilers, and have everything in readiness for a cold weather campaign. R. ERRINGTON.

ORCHARD.

BUDDING, finish, and remove bandages from that done three weeks since. Remove waste shoots from **Stocks**, especially below the bud. **BLIGHT** (American), apply the brush once more, using spirits of turpentine. **APHIDES**, still try to extirpate them in peaches, plums, &c. **RED SPIDER**; if this appears, dust flowers of sulphur on the back of the leaves. **CHERRIES**, net carefully. **Coccus**, or scaly insect; if this appears, use soap-suds. **FIGS**, continue to disbud, and commence stopping rambling shoots. **VINES**, follow up stopping of laterals, and keep them thin; also thin the berries. **APRICOTS**, stop gross leaders, and keep down breast shoots by pinching. **PEACHES** and **NECTARINES**, stop all gross shoots, and keep under breast wood by the same process; where too thick, remove shoots altogether. **PEARS**, remove foreright spray, thinning or stopping the wood freely, first selecting and tying down all short-jointed and brown-looking wood. **PROTECT** fruit with nets, &c. **WASPS**, destroy nests. Late **STRAWBERRIES**, water well. **ALPINES**, reduce runners from, and place slates or tiles beneath. **STRAWBERRIES**, make plantations of early and strong runners. **RASPBERRIES** (double-bearing), remove all barren shoots from, and carefully train those in blossom. **TOMATOES**, thin, stop, and train. Commence and complete, as soon as possible, all **NAILING** and **TRAINING**, whether on walls, pales, or espalier trellises. **GOOSEBERRIES**, still continue the extirpation of caterpillars. **BUSH FRUIT**, retard by shading with mats. **GRAFTS**, remove stock shoots from, and protect from wind and waving. R. ERRINGTON.

ORCHID-HOUSE.

AIR, give plentifully on all fine days, to consolidate the now fast-forming new pseudo-bulbs. **BASKETS**, dip every week in tepid water. **BLOCKS**, syringe twice a day. **BARKERIAS** now growing, keep very moist till the annual growth is made; allow the air to play freely upon

them, this will strengthen the plants much. **DENDROBIUMS**: many will have made their new pseudo-bulbs; cease giving much water to these, and remove them into a cooler house. **EPIDENDRUMS** in the same condition give a similar treatment to. **GRAMMATOPHYLLUM**, a noble orchid, continue growing on yet. **HUNTLEYS** having no pseudo-bulbs, continue to keep moderately moist and cool. **INSECTS**, diligently keep under, or they will be a pest all the year, and be difficult to eradicate in winter. **LÆLIAS** will now be growing freely, be liberal, and use the syringe frequently; if on blocks, add a thin layer of moss to give and retain moisture about the root. **MOISTURE TO THE INTERNAL AIR**, continue to supply daily, especially in the growing department. **PERISTERIA ELATA**, and all similar terrestrial species, keep moist as long as the bulbs continue to swell, but not one moment longer. **PLANTS IN BASKETS**, remove into a cooler house when in bloom, or as soon as the new growth is perfected. All plants that have made their pseudo-bulbs quite up should have the benefit of a lower and drier atmosphere. This point must be strictly attended to, because if they are kept moist they will start to growth the second time, which will weaken stronger growth and materially injure the blooms. The success of next year's bloom depends much upon the strength of the preceding year's growth, together with a judicious period of rest, induced by a cool and dry treatment. T. APPLEBY.

PLANT STOVE.

ACHIMENES done flowering set out-of-doors, laying the pots on one side, to keep the bulbs at rest, and free from wet. **AIR**, give liberally through the whole month, unless cold, wet days intervene towards the end. **CUTTINGS**, pot off as soon as struck, because the time is short for them to acquire strength to carry them through the winter. **GLOXINIAS** and **GESNERAS**, as they cease blooming, treat the same as *Achimenes*. **HEAT**, keep under as much as possible, but have the flues and pipes in good order for working, as cold nights might come towards the latter end. **INSECTS**, destroy as much as possible, or they will rapidly increase. **IXORAS**, specimens of, top-dress and tie out, so as to form handsome bushes of a rather pyramidal form. Young plants give a shift to, b.; stop and tie out; moisture, supply plentifully both to the roots of the plants, and to the internal air. **PASSION-FLOWERS**, and other climbers, train freely, and tie them so as to allow plenty of light to descend amongst the plants. **PLANTS IN FRAMES**, top dress and repot if needful; give plenty of air to, and water only in the mornings. **SPO-GES**, use freely to clear the leaves from dust and insects: this is preferable to so much syringing. **WATER** more moderately as the days shorten. **WEEDS** and decaying leaves remove daily. T. APPLEBY.

KITCHEN-GARDEN.

Particular attention should be paid to **SOWING** from the 1st up to the 12th of this month, as so many of our best vegetables and flowers are produced for the next season from the sowing made at the above-mentioned time; the *Cauliflower* only should be deferred until about the 21st of the month. **ALEXANDERS** and **ANGELICA**, sow, and attend to earthing-up that in growth. **ARTICHOKES**, cut away the heads of, whether required for use or not, for if allowed to run to flower they will very much exhaust the roots. **ASPARAGUS**, attend to; keep clear from weeds; should any branches be falling about over pathways let them be tied up to sticks rather than cut away. **BASIL**, attend to; cut and dry off steadily when in bloom. **BORAGE**, sow, and thin out advancing crops, or earth-stir and look after seeds. **BORECOLES**, **BROCOLIS**, and **BRUSSELS SPROUTS**, plant out as early as possible; do not spare manure among any of the Cabbage tribe. **CABBAGES**, sow of any favourite kinds; also a little *Red Dutch* for pickling; and prick out for planting out next month. **CARROTS** (Early Horn), sow on dry, warm borders for early spring use; keep the growing crops clear from weeds. **CAPSICUMS**, encourage the growth of by earth-stirring. **CAULIFLOWERS**, sow out in open quarters, so as to have a stock of healthy, sturdy plants about the 21st to the 24th, to stand the winter; also plant and water well. **CELERY**, plant out in earnest, and attend to earthing-up advancing crops in dry weather. **CRESS** (American), sow. **CUCUMBERS**, attend to thinning, topping, and clearing away all decayed leaves, either in pits, frames, or out-door crops; cuttings may be struck of any favourite kinds for autumn and winter growth. **ENDIVE**, sow, plant, or prick in succession, and tie up, or cover up, full grown for blanching. **HERBS** of all kinds, cut and dry when in flower. **HOING**, attend to on all favourable opportunities. **LEES**, plant out. **LETTUCES**, sow *Brown Cos* and *Hardy Hammer-smith*, the two best kinds for general culture. **MELONS**, give plenty of air to; be sparing of the water among those ripening off their fruit; encourage the growth of the younger crops just swelling off their fruit with about three liberal waterings of liquid manure-water; let it be given steadily from the spout of the water-pot, and principally at the back part of the beds, and not over the crowns of the plants; and sprinkle almost daily in hot, dry weather, at shutting-up time. **ONIONS**, sow of the silver-skinned kind, being most hardy, to stand the winter; keep the advancing crops clear from weeds, and press down stiff-necked towards the end of the month, as cases may require. **PARSLEY**, cut down or transplant, or sow, and collect seeds. **POTATOES**, if early and ripe, may be taken up, and stored away in a cool situation, for present use, in particular where the ground is wanted for some other immediate crop. **RADISHES**, sow, if required. **SAVOYS**, plant out as early as possible. **SEEDS** of all kinds collect as fast as they ripen, or the birds will make sad havoc among them. **SORRELS**, keep flower-stems cut away. **SPINACH**, sow, of the prickly seeded kind, in well prepared borders; and sow in drills ten inches apart. **SWEET MARJORAM**, see *Basil*. **TURNIPS**, sow, of the little early kinds, any time during the month, and attend to thinning and hoeing advancing crops. Should the weather be very hot and dry, *Water* thoroughly previously to sowing the various seeds, and if a little shading could be given from ten to three in the afternoon, until the plants are up, all the better. T. WEAVER.

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WEEKLY CALENDAR.

D M	D W	AUGUST 7—13, 1855.	WEATHER NEAR LONDON IN 1853.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in Inches.						
7	Tu	Phalacrus corticalis.	30.059—30.037	68—44	N.	—	34 a 4	37 a 7	11 45	24	5 33	219
8	W	Phalacrus millefolii.	30.057—29.971	74—48	S.W.	—	35	36	morn.	25	5 26	220
9	Th	Phalacrus caricis.	29.944—29.882	73—48	S.W.	—	37	34	0 30	26	5 18	221
10	F	Phalacrus teneus.	29.838—29.791	77—48	N.W.	—	38	32	1 28	27	5 10	222
11	S	Phalacrus coruscus.	29.947—29.934	75—58	W.	—	40	30	2 33	28	5 1	223
12	SUN	10 SUNDAY AFTER TRINITY.	29.924—29.897	74—48	S.W.	—	42	28	sets.	28	4 52	224
13	M	Phalacrus geminus.	29.902—29.731	86—54	S.	01	43	26	8 a 12	1	4 42	225

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 74.5°, and 51.1°, respectively. The greatest heat, 93°, occurred on the 10th, in 1842; and the lowest cold, 32°, on the 13th, in 1839. During the period 117 days were fine, and on 79 rain fell.

THE FRUITS AND FRUIT TREES OF GREAT BRITAIN.

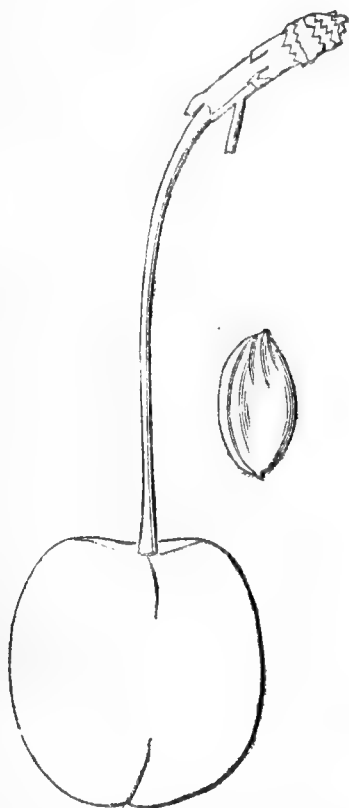
NO. II.

REINE HORTENSE CHERRY.

IDENTIFICATION.—Bon Jard. 1843. p. 486. Dubreuil Cours. 644. Hort. Soc. Cat. Supp. 10.

SYNONYMES.—Reine Hortense Larose, Ann. Soc. Hort. Par. 1838. Cerise Monstrueuse de Bavay, Bavay Cat. 1852. p. 6.; Belle de Bavay; Belle de Laeken; Hybrid de Laeken; Belle Suprême; Belle de Prapeau; Belle de petit Brie; Guigne de petit Brie; Cerise d'Aremberg; Monstrueuse de Jodoigne; Cerise Morestein; Cerise Louis Dix-huit; Seize à la livre; Grosse de Wagnelée; Rouvroy; Belle Audigeoise; Fisbach; De Meruer; Lemercier.

FIGURES.—Album de Pomologie, as Grosse de Wagnelée, Vol. iii. 61.



ALTHOUGH it is comparatively but a few years since this Cherry was first obtained from seed, it has already acquired as many synonymes as if it had been a hundred years in existence. There is no better criterion of the popularity or excellence of a variety of fruit, than the number of synonymes it possesses, as it rarely happens that one which is considered unworthy of cultivation attracts sufficient attention to obtain for it any remarkable distinction.

The fruit of this variety is very large, being upwards of an inch long, and an inch wide. It is somewhat

oblong in shape, very much compressed on both sides, which gives it the appearance as if it were flattened, and, generally, it is narrower towards the stalk than the apex; it has on one side a very faint suture, which is most distinctly marked at the stalk and the apex, where it terminates in a dark brown point, which is not at all indented. Skin very thin and transparent, at first of a pale flesh colour, changing to a bright cornelian-red, and when fully ripe assuming a dark brilliant red colour. The stalk is very slender, and entirely green, from an-inch-and-three-quarters to two inches long, and rather deeply inserted in an oval cavity. The flesh is yellow, netted, very tender and very juicy, with a sweet and refreshing acidulous flavour. The juice is quite pale; the stone oblong, and small for the size of the fruit.

It ripens about a fortnight after the Mayduke. The tree, even in its young state, has a loose and spreading habit of growth, and when aged is almost quite pendulous, very full of shoots and foliage, and possesses all the appearance of the variety known as the *Tous-saint*. A tree, which we lately saw in the nursery of Mr. Rivers, of Sawbridgeworth, and which has now acquired a mature growth, convinces us that this is a hybrid between one of the Duke family and the *Tous-saint*, from the habit it has of producing racemes of bloom at the extremities of the young wood in the autumn, as the latter variety does. It has a very beautiful outline, and would form a very desirable object on a lawn, or in a pleasure-ground, as an ornamental tree.

There seems a dispute between the French and the Belgians as to which of these nations has the honour of giving birth to this beautiful fruit. The French story is, that M. Larose, a nurseryman at Neuilly, raised a Cherry from the stone of the English variety, known as the *Carnation*, but which, in regard of the habit of the tree, and the form of the fruit, was quite distinct from it; this he called *Cerise Larose*. In 1832, he planted stones of this new Cherry which he had raised, and in 1838 one of the offspring produced bloom, which had the fragrance of the Hawthorn, and fruit of such a size as to astonish the most enthusiastic pomologists; and this was called by M. Poiteau, *Cerise de la Reine Hortense Larose*, in honour of "the beautiful Hortense," mother of the present Emperor Napoléon.

The Belgian account is that of M. Bavay, a nurseryman of Vilvorde, near Brussels, who says that this

variety was found at an ancient dwelling of his, called "Le Convent des Carmes," at Vilvorde, and "was cultivated for sale by him about 1826; that is to say, ten or twelve years before it had been cultivated in France under the name of *Reine Hortense*. Which of the two accounts is the correct one we have not been able to discover; but M. Larose's account of its pedigree appears to be correct, for it evidently belongs to that division of the Duke family with yellow flesh, of which the *Carnation* is one.

We have already remarked upon the number of synonymes which we have given at the top of this article, and which are all derived from the most authentic sources. Through the kindness of Mr. Rivers, of Sawbridgeworth, who has afforded us every facility for examining his large collection, we detected it under the various names of *Grosse de Wagnelée*, *Belle de Prapeau*, *Seize à la livre*, *Belle de Bavay*, *Belle de petit Brie*, and *Fisbach*. Under the latter name, we ourselves had it from Cadolzburg, in southern Germany; from M. Papeleu, of Wetteren, as *Belle Audigeoise*, and from M. M. Baumann, of Bolwiller, as *Lemercier*; but Mr. Rivers has a tree of *Lemercier*, which appears to be very distinct in habit from *Reine Hortense*, being of upright growth, like the *Mayduke* or the *Royal Duke*, and the fruit, though similar to the *Reine Hortense*, is much later, and before it is quite ripe is considerably more acid than that variety; it is also a very much better bearer. It may be that there are several seminal varieties of this, and that *Lemercier* is one of them.

It is very probable that the CHERRY was known to the Jews, for it grows wild in Asia; and according to Berachoeth, a good authority, its fruit is mentioned in the Talmud, under the name of *Gadgadaneeyoeth*. However, that this is uncertain is sufficiently shown by the fact, that some learned Hebraists think this lengthy word means Coriander-seed; whilst others consider that it intended a herb relished by camels!

It is doubtful if even the Greeks, in the time of Theophrastus, were acquainted with improved kinds of Cherries; for his description of the *Kerasos* hardly agrees with our Cherry-tree.

Theophrastus died about 288 years before the birth of Christ, and we have no decided information relative to this fruit until Pliny wrote his "Natural History," about the year 79, or nearly eighteen hundred years ago. He then wrote thus of the Cherry:—

"Cherries were not introduced into Italy before the victory of L. Lucullus over Mithridates. Lucullus conveyed them thither from Pontus, in the year of the City 680 (or about 73 years before the birth of Christ), and in 120 years the fruit had been carried across the sea until it reached even Britain. Yet no cultivation could induce it to flourish in Ægypt. Of Cherries, the *Apronian* are the most red, as the *Actian* are the blackest, and, like the *Cæcilian*, round. The flavour of the *Julian* is agreeable, but scarcely elsewhere than under the tree which bore them; for they are so tender-fleshed that they will not endure the carrying away. Among the *Duracine*

Cherries, that called, in Campania, the *Plinian* is the most superior, and in Belgica, the *Portuguese*." (*Nat. His.*, xv. c. 25.) It is not difficult to identify some of the species, or sub-species, of Cherries now known to us with those thus enumerated by Pliny. For instance, the *Actian*, or black Cherry of the Romans, we believe to be the small, black Cherry so common all over southern England, and especially along the valley of the Colne, a river of Essex, so called from the numerous Roman colonies in its vicinity. These small, black Cherries are very commonly known in England as *Meries*, a name for which we could never satisfactorily suggest a derivation until we met with the following passage in Lyte's "Herbal:" "The common sower Cherries is of the later writers taken to be a kinde of *Cerasus*, and, therefore, the fruite is lykewise called *Cerasa*, of some *Merendæ*, or *Marenæ*. Platina writeth of one medicine *ex merendis*, and Cordus writeth of a compounde named *Dia marenatum*, and both of these are made of Cherries." These *Merendæ*, we believe, are the origin of the name and identical with our *Meries*, and the *Merise* of the French.

We have seen that Pliny records that Cherries were brought into England about A.D. 47, and we may next add a few notes relative to the earliest history of the fruit in this country, and it is to be regretted that such history is but very scanty.

That Cherries in the early part of the 13th century had become a commonly cultivated fruit is evident from the note made by Matthew Paris in his Chronicle of the year 1257. He says—"Apples were scarce; Pears still scarcer; but *Cherries*, Plums, Figs, and all kinds of fruits included in shells were almost quite destroyed."

Passing on to the 16th century, we find Gerarde then stating—"Myselfe with divers others have sundry sorts in our gardens; one called the *Hart Cherry*, the greater and the lesser; one of a great bignesse and most pleasant in taste, which we call *Luke Warde's Cherry*, because he was the first that brought the same out of Italy;* another we have called the *Naples Cherry*, because it was first brought into these parts from Naples. We have another that bringeth forth Cherries also very great, bigger than any *Flanders Cherry*, of the colour of jet, or burnished horne, and of a pleasant taste, as witnesseth Mr. Bull, the Queen's Majesty's Clockmaker, who did taste of the fruit, the tree bearing only one Cherry, which he did eate (greedy, selfish Mr. Bull!) but myself did never taste it." Poor Gerarde was evidently in great dudgeon at not having a bite of the Cherry; so after mentioning one or two other varieties, he adds, "many more sorts we have in our London gardens, whereof to particularize would greatly enlarge our volume, and to small purpose."

Parkinson, a few years later, writes of them more fully, giving a list and description of more than forty varieties, among which are the following still known to us.

The *Morello*, said to be so called from the colour of its juice being like that of the Mulberry (*Morus*).

* This is still known as *Lukeward's Heart*. See Hort. Society's Catalogue.

The *Arch-duke*, "one of the fairest and best," but "scarce one of twenty of our nurserie men doe sell the right, but give one for the other; for it is an inherent qualitie, almost hereditarie with most of them, to sell any man an ordinary fruit for whatsoever rare fruit he shall ask."—Libellous John Parkinson!

The *Hartlip*, spelt in the Horticultural Society's Catalogue "*Hartlib*," but it was not named after the writer bearing the latter name, but "of the place where the best of this kinde is being noursed up, being between Sittingbourne and Chatham, in Kent."

We might mention many more, but we will conclude with the *Bigarreau*. Parkinson spells it *Biquarre*, and describes it as "a fair Cherry, much spotted with white spots upon the pale red berry, but sometimes discoloured halfe white and halfe red." This, however, was known on the continent a century before Parkinson's time; for Lyte, in 1579, says that "those Cherries that be halfe white be called *Bigarreaus*;" and there is good reason for believing that this kind is the same as the *Duracina* of Pliny, for the hardness of the flesh is appropriate to the name, as are its various colours, for Pliny says, "it is dark, and red, and green, as if always about to ripen."

WE do not consider that the Potato crop is yet safe from the Murrain, for vegetation, this year, is a month later than usual, and the Potatoes at the end of August will be no riper than they usually are in July. If dry, hot weather speedily sets in the crop may generally escape; but that our opinion is not unsustained by facts, is testified by the following, extracted from a letter, dated Penzance, July 31st:—

"The Potato disease is equally general, rapid in its effects, and destructive as in the worst of former years. West of Truro scarce one untainted stem has met my eye; though from thence eastward to Torquay, isolated patches alone indicate its presence. In Devonshire, indeed, it seems as yet very partial."

MORE than once we have had occasion to publish our unqualified praise of Mr. Turner's "*Budding Knife*," "*Pocket Pruning Scissors*," "*French Flower Nippers*," and "*Ladies Pruners*," advertised in our last number, and we again recommend them to our readers, as being the most effective implements for their intended purposes, and of the best quality. So good have we found the steel of which they are formed, that we recently drew Mr. Turner's attention to the defective *Pruning Knives* we are compelled to use owing to the want of better. The following reply justifies us in believing that the defect complained of will soon be remedied:—

"I duly received your letter, and, in reply, beg to say, I have put some of the Pruning Knives into hand, and that I believe I can make some Pruning Knives of the right sort. I have been in the practical part of the cutlery business for nearly thirty-four years. I have, during a great part of that time, paid particular attention to the nature and temper of steel. I have some Pruning Knife blades by me some time, which are made of steel twenty years old. They are well hardened and tempered by a very singular process, which is the result of long observation.

"Perhaps it may be gratifying to you to know what is the process of tempering steel to which I allude. Something more than twenty-five years ago, I accidentally let my Pruning Knife fall into the garden well. It remained there for a long time, but when the well was cleaned out it again turned up. I took and ground it up again, and never had I such a good knife. Since that time I have tried many such experiments, and in every one it has had the desired effect. I find, that by having articles made from good steel that has been kept in a damp or wet place during a length of time, it has greatly improved its qualities. I have found, that by having goods made as aforementioned, and afterwards kept in a damp or wet place, the steel is always of a better quality. For toughness and keeping a fine edge it is really astonishing. It appears to me, that steel kept in water always imbibes something from the water which it otherwise cannot possess. Whether it is oxygen or hydrogen, I have not a sufficient knowledge of chemistry to determine. I could write hours on this subject, furnishing proofs of what I have just said.—J. TURNER, Neepsend, Sheffield."

THE FRUIT-GARDEN IN AUGUST.

Now is the time when attention should be paid to that important process—the ripening of the wood in fruit-trees. Unless this is complete, our readers may be certain that all other cultivation will be rendered useless. This I have proved in all cases which have come within my knowledge for many years, and since the commencement of THE COTTAGE GARDENER I have not ceased to inculcate the importance of it on our readers. I much fear, however, that its importance is still sadly underrated, even by practical men; and if so, it is much to be regretted, as it is not until an impression becomes general, and a matter of recognised practice, that real advancements are made in gardening affairs.

Again, then, I say, do all you can at this period to promote the ripening of the wood.

We all know what a fuss was made a score years ago on behalf of Pear-pruning. One cultivator would affirm that it was a mistaken policy to prune or nip the fore-right shoots of Pear-trees in summer—it was meddling too much with nature; it caused the embryo fruit-buds to push or sprout, and played sundry other gambols of a most ungardening-like character. Other Pear-growers had discovered that the very best plan, of all others, was to bend or break the spray half-through, and let it hang down. This practice, too, had many converts; but not amongst the practicals.

Now, one great fact lies at the bottom of all this quackery;—the trees should not be so tempted. "Break a man's head, and then apply a plaster," is an old saying; and I feel irresistibly tempted to apply it to the case in hand, by referring to the fact of trees being incited to produce too much spray. It certainly is not very easy so to constitute a soil for a given tree, as to sustain that tree in a fruitful equilibrium in all seasons, dry or wet. Knowing, however, the extremes of climate that we Britishers have to undergo, it long since occurred to me, that as the over-production of spray is the rule in fruit-gardening, we should do well to lean to the moderate side of the question, and provide rather against rainy and growing periods than dry ones. This end is met best by avoiding manurial and even organic matters in the compost used, and in falling back on surface-dressing, and mulching, in cases of drought.

These observations may appear somewhat digressive, as to the point in hand, but in reality they have a close bearing on the subject. I will, however, come closer to the subject of this paper.

Let us take the *Peach* and *Nectarine*. How loud and repeated are the complaints as to their failures; and why? Glass walls, somebody will say, are the structures that were wanted. Orchard-houses, says another,

are the last great improvement in the culture of our superior fruits. But how can these well-meaning persons thus settle the dispute, with the fact before their eyes, that first-rate Peaches, Nectarines, and Apricots are produced in the utmost profusion in our northern counties without such structures?

We are told, however, that the northerners have their trees retarded much beyond the time of the southern; and that this is the prime secret. If so, why do we not hear more about retardation, as to fruit blossoms, in the south? The very principle has scarcely been recognised until the last three or four years, and I am not well assured that it is so recognised at this very hour.

We all know that shading, or screens of any kind, applied to a fruit-tree, in January, and continued as long as expedient, will, either at London or Johnny Groat's, throw the blooming period some weeks back. Let us, then, beg of our friends in the south to either admit the principle, or repudiate it on sound ground.

I find, that through a strong desire to get this point established, I have somewhat overshot my mark; but I will at once turn back to more practical matter; just observing, that these digressions all bear more or less on the main question.

To *Peaches and Nectarines in August*, what should be done?

We may fairly suppose that the young shoots have gone through the processes of "thinning out" and training; also, that gross shoots have been long since pinched or stopped. In the early part of the month the fruit will commence its last swelling, or, in our more southern counties, in the latter part of July; and this very period is that which I select for what may be termed a general stopping of the young sprays. This I have practised for years, and see no reason to depart from it. One effect speedily follows this procedure; that portion of the foliage which had been but recently produced attains a full development, and, of course, is in a position to add to the productive stores of the tree, instead of taking from them. We all know that good Vine-dressers do not encourage the very latest growth on their Vines; they pick them away, for reasons very similar to those urged for the Peach and Nectarine.

But, speaking of the ripening of the wood, this practice has a particular tendency that way; indeed, how could it be otherwise?

It may be readily imagined that stopping the enlargement or extension of a deciduous tree, in July or August, by checking all excessive demands for the ascending sap, must tend to a solidification of the wood; and the latter we call ripening.

Since, however, it is seldom that all portions of a fruit-tree are equally balanced as to strength; this is the very occasion to establish an equilibrium, as far as art can effect it.

It so happens, that this stopping is highly conducive to this end, when managed judiciously; as I have often proved. Of course, as a general principle, the pinching a shoot in full growth has a direct tendency to stop its enlargement, and *vice versa*. If any one doubt this, let him take some plant, or tree, on which to try the experiment; let him select two boughs, and pinch the one, and leave the other unpinched—such, followed up through a couple of years, will soon convince him of the truthfulness of this point.

Now, judicious "stopping" I have, for many years, made the groundwork of all attempts at equalising the power of the branches on trained trees, and, of course, all other trees. I have not, however, waited until the beginning of August this year, feeling assured that the principle might be pushed much further. My Peaches, Nectarines, Pears, &c., are at this moment (July 28th)

all gone over according to the principles here suggested; and in due time I will state the results in *THE COTTAGE GARDENER*. We have stopped the point of every shoot which needed no farther enlargement, and have equally refrained from stopping those which required an accession of sap, to bring them into a position to compete with the superior branches.

Again, then, I urge, that all pains be taken to ripen the wood, as well as fruit, during the month of August. It is scarcely too much to affirm, that on this month, more than any other, depends the success of the ensuing year.

It really is lamentable to hear, on spring's return, so many good-looking and well-meaning gentlemen complaining of their singularly unfortunate locality as to fruits. It matters not what latitude they are in; whether the South Foreland in Kent, or the Orkneys: they are a complaining family, and would appear to be worse used by far than the rest of the world. If we happen to talk of twenty degrees of frost, this family speedily quote twenty-five; talk we of damp air, why theirs is dry once or twice in the year. This really makes me desirous of naming a joke about a garden in the Highlands of Scotland, as bearing on bad climate.

A gardener—a southern—had hired himself to a gentleman in the Orkneys, or Western Isles, I forget which. Down he went from the King's Road, or some sheltered nook about the southern metropolis; possibly he did not even ken what a "Scotch mist" is. It rained almost all the way, and sometimes "snawed," just for variety's sake; at last he set foot on this Island, where, of course, he would be entertained with a cold collation. Being excessively annoyed by these keen and ill-mannered northern sleet-bearing breezes, he fell into a fit of Cockney impatience, and called for the waiter of the hotel. "Pray," says he, "how many fair days have you in the year in this Island?" The waiter, being a true Donald, at once answered in a sort of half Gaelic, "jist wan, sir." "Indeed," said the Londoner, "then have the goodness to pack up my traps again, for this climate will not agree with my constitution."

R. ERRINGTON.

DEADENING GLASS.—For any extensive surface of glass, as the roof of a greenhouse, the cheapest yet very effectual application is a very little whiting, mixed with a weak solution of size, and applied thinly inside by means of a large whitewasher's brush. A more permanent, but far more expensive application, is a very little white lead, mixed with mastic varnish, and put upon the glass, with a hard and large painter's brush, letting only the *points* of the hairs touch the glass.

ROSE BLAIRII No. 2.—THE GARDENERS' BENEVOLENT INSTITUTION.

I SHOULD have written a chapter on this Rose six weeks since, had it not been for the reports of the exhibitions; meanwhile, Mr. Blair, who originated the said Rose in 1828 or 1829, has been elected a pensioner on the funds of the Institution mentioned at the head of these notes, and as some of the subscribers have made complaints against the election, I think it a good time to announce that I have changed my opinion on the subject of these elections, to which I am one of the original subscribers. I served twelve months on the committee the second year after the formation of the Society, and never missed one of the meetings that year, having then lived near London. I have been elected on the committee two or three times since then, but I could not attend, on account of the distance. I had a notion

all along that those gardeners who subscribed most to the funds of the Institution had the best claim for election, and I regretted, only three years since, that there was no rule by which subscribers should take preference at elections; but I have altered my mind, on further consideration, and now my conviction is, that I was formerly in the wrong.

If it is urged that I ought, on principle, to hold on to the end of the chapter without a change, I must urge, in return, that in that case principle would only be a softer name for obstinacy. The claims of every candidate are, first of all, well sifted and made out by the committee, before the name is entered on the list of applicants, and every candidate is an object for charity; but if my former ideas were in force, none of them had a chance of election, except such as had subscribed to the funds; then it was no charity at all, but a mutual benefit society, in which voting were of little use, as the oldest subscriber would have the first chance, and so on, till the vacancies were filled up. Now, the country abounds with such benefit societies, but no one, or but very few persons, ever think of subscribing to any of them, except the actual members; and so we should soon find it in this, with the insuperable difficulty, which is not common to any other benefit society, that we are scattered all over the country, and cannot meet to put our "heads together" for any good. Indeed, I am so convinced that a benefit society among gardeners is impracticable, and could do no good, that I would stop my subscription to-morrow, if the Benevolent Institution were turned into that form; and yet I was of a contrary opinion so late as three years back.

Then, as to the charge that voting goes by favour in electing pensioners. How should they go but by favour? I cannot see any other way than favour, and very strong favour too. Here is a list of twelve persons, every one of them is an object of charity; but eight out of the twelve are strangers to all, except, say forty of the subscribers; then, if "charity begins at home," do you think that I, or any of the subscribers, will vote for A. whom I never heard of before, in preference to B. whom I have known many years? Or, if I do not know A. or B., if C., one of my fellow-subscribers canvasses my vote for either of them, surely I ought to give him my vote before I would give it to a stranger? That is just the way all such voting and canvassing go in this country; and to my own personal knowledge, the voting and canvassing in our Institution are less liable to undue influence than any, or at least many, of the large charitable institutions in England.

What would you think of buying votes to insure an election to a good charity? Surely nothing could be on a worse footing. Yet it is done every year since the last war. I, for one, bought 400 votes in one day, at one of the best conducted charities in England, and I have the receipt now in the house from a paid clerk of that charity, but I lost the election. I have seen a thousand pounds paid and receipted for at some of these charity elections; but you cannot buy a single vote at our charity.

Now, as to Mr. Blair getting in at our last election. I can account for that very easily. He was a popular man among gardeners, and his name, as the raiser of one of our very best Pillar Roses, went a good way towards obtaining votes for him. But he might have raised all the best Roses in the catalogue, without telling in his favour, if he had been a bad man, or a man who cared for no one but himself when he had the chance; so that voting is a great inducement to good, upright conduct in our society, and I would encourage everything which tended to improve us as a body, or as single individuals. Moreover, I would earnestly ask those who are able to help the poor frozen-out gardeners. Meantime, I shall help you to understand the proper management of Rose

Blairii, and such-like, after telling you that Mr. Blair is a perfect stranger to me; at least, I never have seen him but once, and that in April, 1829, so that I do not favour him more than any one else in his position.

ROSE BLAIRII No. 2.

It is hardly fifteen years since it was received as a fixed law, that if you prune the Banksian Roses at any time in the year, except at the end of May or beginning of June, when their flowers are over for the season, you deprive them of the power of flowering during the following May. Happily there is now no appeal from this decision, and any infraction of the rule is sure to bring more or less disappointment. For full ten years later, it was the maxim with Rose-growers, that all other Roses ought to have the yearly pruning, sometime between October and April; some earlier and some later, according to the views of the different managers, or the kind of Rose to be pruned. Then it was that THE COTTAGE GARDENER stepped in and propounded a new doctrine, that a certain class of Roses ought to be yearly pruned at the end of July, and at no other time. These were the strong-growing Hybrid Climbers, of which *Blairii* No. 2. is the most known.

No sooner said than done; some of the first Rose authorities subscribed to this plan at once, and in less than six years we find this class of Roses under a new system of pruning—summer pruning just as they are gone out of bloom for the season—or an extension of the principle on which the Banksians have done so well. Some of the reasons which have led to this change may be thus briefly stated.

This class of Roses produce very strong wood; middling wood, that is, half strong wood; and weak shoots. At the winter pruning, if the very strong wood was cut in one-third of its length; these shoots made still stronger wood next year, and produced less bloom than before; the next sized shoots were thus too much crowded, and their strength and flowering were injured in proportion, till, at last, two-thirds of a season's growth, or two out of every three shoots were too weak to flower at all, and not only that, but in a few more years began to wear out altogether, leaving naked bottoms. We are partly in this transition state at present; that is, those of us who neglected to take advantage of the new mode of summer pruning are having our strong Roses getting bare below, and more bare, year by year, while the over-luxuriant growths are receiving proportionable additions of strength, and failing to bloom exactly in the same ratio as they thus increase in strength. I think it was in the summer of 1852, that I stated particulars about a *Blairii* Rose under this treatment, which I undertook to restore to its wonted bloom, after failing for some years to produce anything like a good bloom, and at last no bloom at all; there was hardly a leaf on it as far as I could reach up against the wall; the middle, higher up, was not far amiss, but the top was too strong to flower.

Here, you see, there were two evils to get rid of, and cure, if possible—to bring this Rose first to a balance of growth all over it, and to restore it to a free-flowering condition as soon as could be done. Which of the two would you attempt first? Many would say, let us first have a good bloom, and we shall balance accounts soon enough; but that is not the right way. A "sick man" ought to be "set on his legs" before you ask him to walk; and so it is with these Roses; if you want them perfect from top to bottom, the first thing is to get the whole growth all over the surface, to be as near as is possible of equal strength then to it, so as to keep it thin for the future, and flowers will come, as it were, "of themselves." That was just what I had done, and you never saw a better bloom of Roses than that *Blairii* Rose produced this last July; and I am perfectly sure

that every healthy Rose in this country may be brought back from a naked condition, or from an uneven growth, or from too much growth, to bloom as well as this very Rose, by the same rules which were applied in this instance, and by no others; therefore, although I have written on the very point two years, let me now give you a condensed history of the treatment from the first to last July.

Before the leaves turned colour in October, I pruned all the very weak shoots I could find about the bottom of the Rose, which is trained against a west wall, and is from twenty to twenty-five feet high, and spread in proportion. In the last week in February the middlings were pruned, some to four inches, some to six inches, and some to a little more, but all the small ones were cut back in October to one or two eyes; early in March the plant was in leaf—I mean the upper part of it—and odd enough it looked, some of last year's shoots being from three to six feet long. About the middle of April, or rather later, I went over the topmost part and cut off every leaf, and down to where the eyes seemed yet sleepy; by this time, the little buds at the bottom were getting into leaf, and those on the middle parts were full and plump, the top ones being thus caught nodding were just as I have stated; not a single bloom did we get that year from this Rose. In July, the stronger shoots were stopped, here and there, and no more; the rest were "tacked in" to the end of October, and the smallest were then cut as before, to one or two eyes; the middle-sized ones ditto in February; and the strong in April; not a single Rose, or very few indeed this season, also, and none were expected; but our growths were visibly getting more into a balance; and ditto again till last April, when all the long shoots were left untouched, and ours was the best bloomed *Blairii* in the county this season; then, after flowering, we turned a new leaf—the very leaf which some people would have turned first of all. We pruned the plant as fairly as ever a Rose was pruned in February, or all through the winter; the pruning itself was odd, if we might call it pruning—for it was an exceptional case—the plant was too full of wood, and at least two whole shoots were cut clean away for every one that was left above the middle of the plant; and cut so close that you might think no more shoots would ever come from the same parts—but that we shall see; all that are now left are medium-sized shoots, and these are nailed in their full length to flower next year, and I would not have them touched for the world, till after they have bloomed next July; then they ought to be clean cut out, and any that may be considered too strong as well; but for two or three years to come, perhaps always, we shall have to cut-in the very weakest shoots to two or three eyes in *October*, not a day later.

Then, to make a short story of it, all these summer Roses which "run away" from you ought to be pruned at the end of July, and only then; the pruning to be a close cutting of all the strongest shoots till you are sure the plant is thin enough; and what shoots you leave to leave them at their full length; at least, for my part, I can see no use in cutting them a little back. Again, when you see a Rose getting bare below, you must have an October pruning to one or two eyes in addition to the July cutting out.

D. BEATON.

ORANGE TREES AT THE LUXEMBOURG AND VERSAILLES.—The pomegranate and orange trees of the garden of the Luxembourg are at present being transferred into new cases of larger size. The collection of orange trees belonging to the Luxembourg is one of the most remarkable of any of the public gardens in France, both from the number and age of the trees. Orange

trees, it is known, attain a vast age. In the orangery at Versailles is one known under the three names of of "Grand Connétable," "Francois I.," and "Grand Bourbon," which is more than 400 years old. It came from some pippins of a tree of bitter oranges planted in a pot at the commencement of the 15th century, by Eleanora of Castile, wife of Charles III., King of Navarre. The trees which sprang from them were preserved in the same case up to 1499, at Pampeluna; they afterwards passed into different hands, as rare and precious objects; and then became the property of the Constable de Bourbon, who placed them in his chateau de Chantelle, in the Bourbonnais. The property of the constable having been confiscated in 1522, the orange trees were sent to decorate the Palace of Fontainebleau, which Francois I. had caused to be restored and enlarged. When Louis XIV. had completed Versailles, and built its magnificent orangery, he gave orders that all the orange-trees existing in the Royal residences should be conveyed to it; this was in 1684, and the orange-trees of Pampeluna, which were among those thus removed, were then two-and-a-half centuries old. The "Grand Constable," the most remarkable of them, is, notwithstanding its great age, still perfectly vigorous.—*Galignani's Messenger*.

MEALY BUG, AND OTHER INSECTS.

"SIR,—I should feel greatly obliged to you if you could inform me how to get rid of the Mealy Bug, as I am troubled with it among the Vines and Peach-trees in the house. I had the Vines cleaned of all the rough bark, and well painted with 1 lb. of sulphur, 1 lb. of soft-soap, and a little tobacco-water and soot and lime; still they make their appearance on the Vines by the time the Grapes are being thinned. There are plants cultivated in the house: stove plants in one, and greenhouse plants in another. I could clean all the plants out of the Peach-house and one Vinery, and I think I could lay the other plants down on the floor and cover them over, if there is anything that I could suffocate them with. I place the early Vines in a box. Will it be the best to dress the Vines before they are placed in the box, or when they are taken out to force? One house of Grapes are now ripe; the other being thinned. I have dressed the last house over on the stem with the mixture recommended in *The Cottage Gardeners' Dictionary*. I should be much obliged for an answer through THE COTTAGE GARDENER.—A SUFFERER."

It so happens that I have had several private letters of a similar purport to the above. The gardening public has come to look upon the presence of insects so much as just another expression for bad gardening, that but few of any eminence will come the length of owning that they practically know anything at all about them, though many an hour may be spent in routing them out, and preventing them obtruding upon the eye. There are many great men above this weakness, and who consider it to be no mark of disgrace freely to own that they have to battle with these enemies, and are sometimes likely to be worsted. I recollect, some time ago, admiring a plant exceedingly, which a great gardener possessed in extra abundance, and thoroughly healthy and cleanly they looked; but on telling me I was quite welcome to a plant or two, he added the insinuation, "I must tell you that I have lately got the Mealy Bug in my collection; so you may please yourself." I did please myself—took the plant, kept it by itself, noticed the intruder in the course of a month, and after various cleanings, finding it still appeared, I was forced to throw the plant to the rubbish-heap, after securing a stem cutting, on which all trace of insects and eggs was

guarded against by a thorough washing, first with soap-and-water, and then with the same liquid containing enough of size or glue to make it rather sticky. Whatever may be thought, then, of the style of gardening in which such an insect appears, let it be known that it is far from an uncommon visitor in many celebrated establishments; and even if it were not, that is no reason why the person so unfortunate as to have it should not likewise have the best advice how to get rid of it which the knowledge of the day can command. I pretend to no such exclusive knowledge myself; but the opinions and the practice of others may fill up the seen deficiencies. I hardly know how prevalent the presence of this ugly enemy be *now*, but a few years ago, if I had been called upon to make a large collection of first-rate stove-plants, I should have considered the labour and expense of visiting previously, and narrowly examining, some of our best mercantile establishments, as anything but money and trouble lost.

I say nothing at all about the natural history of these Mealy Bugs; that I would leave to some one more able to do the subject justice; but one thing that renders the clearance of this insect so troublesome and difficult is, that it takes up its lodgings in the soil and among the roots, as well as among the tender shoots. After cleaning, by various means, the fruit and leaves of Pine-Apples, I have seen the Bug clinging in necklace-fashion as tenaciously to the roots as ever I have seen a woolly insect of a something similar kind clinging to the roots of Lettuce plants in summer.

Keeping this latter fact in mind, it will be of importance, in the case of stove or tropical plants, that the roots should be washed or cleaned as well as the tops; and that in the case of more temperate plants, such as the Vine and the Peach, the remedy should, if possible, be applied at a time before the colds of approaching winter induce the insects to seek warmer quarters underground than they can find on the branches, alike for continuing their own existence and depositing their myriads of eggs. In the case of deciduous fruiting-plants, such as the Vine and the Peach, I know of no remedy so effectual as

Burning Sulphur in the House after the fruit is gathered, the wood well ripened, and the leaves beginning to get browned or yellow. I once had a Vine that for two seasons showed this ugly customer two years running, as the fruit was coming to maturity, and that in defiance of various washings. After fumigating with sulphur twice, the one time within a few days of the other, and duly washing the stems afterwards, I never saw another vestige of the Mealy Bug. A friend of mine, who had a vinery that had been troubled with the pest for years, resorted to the same plan, and he tells me, that for two seasons he has seen nothing at all of it. The fact is also confirmed by other statements. For all deciduous plants, fumigating them with burning sulphur, about the time the leaves are ready to fall, is one of the surest means of destroying insects. Several things deserve noticing, or rather repeating, for the sake of the uninitiated. First: *The mode of fumigating*.—I have taken some live coals, or burning pieces of charcoal, on either of these have put some slips of paper, or a handful of chopped straw, all placed in an old garden-pot, or on an old spade or shovel. When fairly lighted, the sulphur was carefully strewed on, and once begun to flare, covered with damp moss or litter to increase the smoke and moderate the pungency of the fumes at first. I have also mixed the sulphur with dried saw-dust, and in that case much covering was less necessary, as it burned more slowly and emitted more smoke. One pound of sulphur would smoke a good-sized house. If thirty feet long, I would have the sulphur in three burners. It is easy to add more if the house is not full enough. If the operator, on opening the door, is able

to walk in it, he must have peculiar lungs, or the dose has not been strong enough.

2. Before commencing operations, be sure that the plants and wood-work are dry. If the wood of the plants be damp it will be apt to be affected, even though fairly ripened. If the wood-work is painted, and is hanging with damp, you will have a darkish hydro-sulphuret of lead, or some chemical combination of a dark colour formed. If even the house, when dry, should present a *little* of that appearance, just let it alone, and future exposure to air will, ere long, bring the colour all right again.

3. Be certain that the wood is well ripened. Every twig and point of a shoot at all green will have the bark killed.

4. Move every plant in a growing state out of the house, or that plant would be injured.

5. If the house stands in a line with another, stop up every hole, cranny, and chink, with putty or clay, so that no sulphur fumes can penetrate the other house. As an extra precaution, if plants are not moved out of such a contiguous house, it will at least be highly advisable to move them from near to the division betwixt them.

6. Choose a calm, quiet day or night for performing the operation; if a little foggy outside all the better, as the fumes will be longer in dispersing.

7. Repeat the operation a second time, after a few days interval.

8. Let the fumigating take place, if possible, when the leaves have finished their functions, but before they fall, as it is better to kill all the insects on them, before giving them a chance of getting into holes and crannies, by shaking and pulling off beforehand.

9. After burning the sulphur, wash the whole of the wood of the trees with soap-and-water, and then, if possible, give a coat of paint to the wood-work of the house; if not, let that also be well scrubbed with a soft brush and soap-and-water. I had a complaint or two, last season, that Mr. Errington and I had led them into a nice scrape, in destroying their plants with fumes of sulphur. I think we can plead not guilty. Every caution was given. Under the conditions mentioned, burning sulphur is a harmless and most useful auxiliary; but nothing could be more certain to ensure destruction to every green and growing plant. The careless, when caught, must, in future, accuse their own recklessness.

Washing and Painting Stems of Plants.—Our correspondent seems to have done this all according to established routine. There is hardly a wash or anointing paint you could think of, for which you could not bring some celebrated gardening authority. Not one of these I have seen but contains some materials highly useful for the end in view. And yet, as a general rule, a few articles secured, a gardener may be left to make up the other components of his mixtures according to his fancy. A great quantity of ingredients, all arrayed in definite proportions, as so much of a pound of this, and so much of a pint of that, so much of an ounce of one thing, and so much of a drachm of another, being, in many cases, just so much well-defined, high sounding quackery.

Something would be gained if a clear distinction was made between washes intended to destroy insects on growing plants, and those smearing paints intended to destroy insects and their eggs by a process of smothering. For the latter purpose, I have long considered that it was of little importance what was used, provided the mixture was innocuous to, or rather beneficial to vegetation, nauseous to insects, sufficiently adhesive not to fall off too quickly, and yet not so adhesive as to prevent the full swelling of the bark when an increase of temperature was applied. On this account, when mere smothering was the object, I have long used

very simple applications, such as clay paint by itself, clay paint with the addition of a little sulphur, or a little soot, or a little soft-soap, or well-boiled melted size, or glue, to make the mixture more adhesive, and to prevent its cracking and peeling prematurely. For Vines and Peaches I have never found any paint superior to two coatings of thin clay, well worked in with a brush. Then, why use any other mixtures, such as this correspondent has done? I candidly own, I could give no proper answer, unless in some definite case. For instance, I know the clay would smother up eggs for the time being, but a live insect would perforate that, that would be inclined to lie still, if a pill, well saturated with tobacco, his insectship knew not how large, must be perforated before his nose got into the atmosphere again. I know of none of our insect enemies that relish tobacco, especially in a liquid form; and, but for the expense, I should not dislike it in all paint applications. Then, as to the *soft-soap*, I should merely find fault with making it nearly one-half of the ingredients; for though it would be useful as an adhesive, in a moderate quantity, and would not injure in largish quantities, where the wood and buds were thoroughly consolidated, I should dread using it nearly so strong where the buds and wood were at all green; especially if the materials were all boiled together previously, as fresh combinations are then apt to be formed, different from the mere mixture, mechanically, when all are in a cool state. Some years ago, I saw a house of Vines killed nearly to the bottom with a similar mixture, by the addition of *nux vomica*, that would have suffered little, if the mixture had been made up with the materials, or rather more in a cool state. Those who have tried the sulphur wash, several times recommended, made by boiling a pound of new lime with a pound of sulphur in a gallon of water, will at once perceive that such a solution must be used *very, very* sparingly, in comparison with mere cold lime or sulphur water.

Then, as to *sulphur*, I have long ceased to attach much value to it, when added, in its solid powder state and cold, to a paint or wash. I have watched leaves painted with thin sulphur water, and seen Red Spider, and Thrips, and even Mealy Bug, dancing and jumping in rare glee over what was to them little mountains of sulphur, and sticking their proboscis into some little green oasis that had escaped the infliction; and if that could not be got, and better foliage were not near at hand, actually getting or burrowing under the nodules of sulphur, without much seeming discomfort. The value of sulphur, in such a paint, is chiefly that which arises from the sulphurous fumes emitted when the sun shines powerfully on the wood of the tree; and to secure this object, I would much sooner practice the method, so long recommended by Mr. Errington, of making sulphur a component part of the lime, or whiting, used in cleaning and beautifying the walls of our houses. I need not here refer to or recapitulate getting fumes of sulphur from hot-water plates.

Then, as to *soot*, I do not object to a portion of it being incorporated in a paint for deciduous plants, as, either from rains or frequent syringings, a certain portion of ammoniacal matter seems to be given off, and so far may enrich the young foliage; but for plants at all tender, and where the buds are the least green, I should be afraid that the sun and soot together would scorch them, as I have noticed it done in some cases.

Then, as to *lime*, used in a very caustic state, it is useful for removing all green parasite mosses and lichens from a tree; but if the buds are not well hardened, even though in the case of a Peach or a Vine they should be ripe enough to produce fruit, the lime may scorch them to the very centre. In fact, not long ago, I examined a Peach-house washed with a composi-

tion similar to that of our correspondent, but where the lime had been in greater quantity, and I was told fresh from the kiln, the fruit-buds of some trees refused to swell, and never would, their inside being so much brown tinder. Of course, if used in a mild state of chalk it will be harmless, and just as good an ingredient for a paint as any other simple earth that might be picked up at random in the garden. It will also be recollected that caustic lime can only operate as such for a short time, as it rapidly absorbs carbonic acid from the atmosphere, and becomes chalk, or just as it was before it was burned.

These passing remarks may tend to promote simplicity on the one hand, and the avoidance of danger on the other, so far as insect-paints are concerned. I would follow out much the same rule with washes for getting rid of Insects from growing plants in our plant stoves. The simplicity or the fewness of the materials used is no bar against their thorough efficiency. Many things have been recommended as a

Wash for Destroying Insects, which, if not very carefully used, will soon make short work of the whole affair, by destroying the plant likewise. Thus, for instance, in the case of the Mealy Bug, I have daubed them with strong ammoniacal-liquor from the gas-works, and killed them, but rather injured the young shoots. I have also allowed diluted spirits of wine to fall upon their woolly backs, and that settled them wherever it touched, and did but little harm. Turpentine was equally effectual, but more injurious to vegetation. Spirits of camphor, equally effectual, and equally prejudicial. Plants with hard foliage would suffer but little from a little of either of these substances in a wash; but provided it was supplied freely enough to tell upon the insects, it would also tell upon the foliage and young shoots of such plants as Vines and Peaches when growing. One or two friends, I believe, can report differently, and I shall be glad to be corrected; but the above is the result of several trials. I have considerable confidence in Messrs. Page's Composition for destroying the Mealy Bug. From my own observation, as well as the testimony of gardeners in the neighbourhood, who have tried it, I am inclined to consider it a valuable wash, detrimental to all insects, and rather promotive of vegetable growth. A neighbour had a large tubful of a wash, the other day, which, in his opinion, was quite as beneficial as that of the Messrs. Page. On a mutual rendering of confidence as to materials, I find he had used much the same things as I had done for a liquid I found very useful. The only drawback to my friend's composition, and that of the Messrs. Page, in the case of swelling Grapes, was the rather muddy character of the solution. I should prefer a clearer wash that would have little or no sediment—at least, not more than chilled water driven forcibly from the syringe, and very clear, would afterwards remove. If the appearance is no object, I have great faith in Page's Composition, though I have not tried it. I have had no chance of trying something like the following on the Bug; but such a liquid has been useful in destroying other insects. Such as it is, it is freely at the service of this and any other subscriber.

Take half-a-pound of sulphur flowers, and half-a-pound of quick-lime; mix, and boil for twenty minutes in three or four quarts of water; allow it to settle, and pour off the clear brown liquid into a bottle.

Soak half-a-pound of tobacco in a gallon of water; add to it a quarter-of-a-pound of soft-soap, and one pound of size or glue; stir and boil for a short time; allow to settle, and pour through a fine sieve. Mix with the sulphur-water, and increase the quantity to ten gallons, seeing that the water added is warm, and stirring well all the time. This should be used with a brush on the infected parts. It is too strong for a general syringing.

After being applied some days, fresh water may be used, to remove any impurities. If this quantity should not be used at a time, the sulphur-water had better be kept corked, and poured out as wanted to mix. When the branches are cleaned, and it is feared there are still bugs about, I think they might be prevented getting to the bunch by tying a little circle of wadding round the stem steeped in a similar solution, only having a double portion of size and soap to hold them securely.

There are a few other matters worth alluding to, which will receive further attention. R. FISH.

THE BABRAHAM SHEEP-LETTING.—Few of our agricultural readers are unacquainted with the merits of the Babraham flock, and the annual gathering on the farm and under the hospitable roof of Mr. Jonas Webb. The anniversary this year was celebrated on July 27th, and the whole of the proceedings went off with the usual *éclat*. It would be as gilding refined gold were we to attempt to expatiate on the merits of the animals exhibited, as their fame has spread over every sea, and into every clime in which cultivation has followed civilization; and the name of Mr. Jonas Webb will be revered as a benefactor to his kind by generations yet unborn when they hear of his indefatigable exertions and success in rendering perfect a breed of animals which are so important a necessary to the aliment of man. The Babraham gathering, too, is important in another point of view; for here are to be found the leading agriculturists from all parts of the world, and such of them as are foreigners have the opportunity of witnessing the English agricultural character in one of its most favourable lights. Mr. Webb, too, has lately turned his attention to the improvement of the breed of short-horns, and his herd on Friday was also a great attraction, many of its members passing into the possession of their admirers. In the field there were at least 600 persons, and the letting commenced about two o'clock; Mr. King, of the firm of Nockods and King, of Saffron Walden, officiating with the hammer. Among the company were Viscount Falmouth; Eliot Yorke, Esq., M.P.; C. A. Smith, Esq., M.P.; Hon. and Rev. Henry Yorke, Hon. and Rev. Vernon Harcourt, Revds. S. Fendall and G. Greene; with Farquharson (Dorsetshire), E. Hicks, S. Jonas Bradshaw, W. P. Hamond, B. Wortham, C. Wilkinson, C. Barnett, C. Crawley, Esqs., also Sir Robert Baker, and M. Robiou de la Tréhonnais, the latter of the French "Journal d'Agriculture Pratique." There were present also the agents of H.R.H. Prince Albert (Mr. Wilson), the Dukes of Manchester and Richmond, the Earl of Yarborough, Mr. Kekewitch (Wilts), and F. Pym, Esq., of the Hasells, Beds.

There were 207 tups penned, and the second led into the ring excited a most spirited competition, the last biddings being between the agent of the Duke of Richmond, and Mr. Overman, a tenant-farmer of Weasenham, Norfolk; the first-mentioned was successful, and the sheep was knocked down to him for the unprecedented price of 170 guineas. Mr. Overman, however, secured the second highest priced tup for 130 guineas, and between the two animals there was but little difference in the points to be detected by the eye of a non-agriculturist. The weights of the clips of wool of each sheep were posted in the field, and from this we learned that the last fleece of the Duke's sheep weighed 8lb. 8oz.; one sheep, a three-year-old, yielded 10lb. 12oz. to the shears. 77 sheep fell under the hammer, the average price being £25 15s. 2d., and the total produce of the letting £1,983 9s. The average price of the previous four years was as under:

Year.	No. let.	Average price.
		£ s. d.
1851	62	22 2 6
1852	69	22 3 0
1853	71	22 6 3
1854	75	25 4 3

In 1853 a sheep fetched 130 gs., and the top price in 1854 was 102 gs.

At the conclusion of the letting, rather more than 300 gentlemen partook of a most excellent collation, prepared as usual in the tent adjoining Mr. Webb's house, and which had been most tastily decorated with evergreens and flowers, under the superintendence of Mrs. Webb and her daughters, who throughout the day gracefully presided over Mr. Webb's hospitality. The Hon. Eliot Yorke, M.P., presided, and was supported by Lord Arthur Hervey, Sir R. Baker, Hon. and Rev. H. Yorke, Major Lucas, Colonel Wall, with S. Quintin, R. Smith, E. Hicks, — Bradshaw, W. P. Hamond, C. Barnett, C. Crawley, F. Pym, and — Fordham, Esqs. The remainder of the company comprised the leading agriculturists from all parts of the country.—*Mark Lane Express*.

HARDY HEATHS.

(Concluded from page 274.)

In my last paper on this subject, I hinted at grouping of the species and varieties. This, to one supposed to be ignorant of the height, colour, and time of flowering of any considerable tribe of plants he may wish to cultivate, is very desirable and welcome information. I propose, therefore, to give a list of Hardy Heaths, arranged in four groups, according to the average height each group will attain to in moderately favourable circumstances, commencing with the tallest.

Whenever I plant a shrub where it is to remain till it arrives at its full magnitude, I always picture in my mind that shrub when it reaches its ultimate height and breadth, and allow space accordingly; but as the shrubbery, plantation, or bed would be, when the plants were small, exceedingly thin and meagre, I plant, first, the shrubs I intend to be permanent, and then fill up with others, by way of covering the ground and sheltering the standards till they (the permanents) require more room. Then the others (nurses, we may call them) are gradually removed, to make the necessary room for the permanents to spread. Let this idea be in the mind of the planter of Hardy Heaths, with this difference—in a mixed shrubbery, or group of shrubs in a bed on a lawn, we fill up with various shrubs of different species; whereas, a Heathery ought to be filled up with nurses of the same genus. He may be allowed, for instance, to fill up his tall-growing Heath-bed with all the varieties of that tribe that reach to the specific height, but it would be very bad taste to fill up the wide spaces with broad-leaved shrubs, merely because they will grow in his prepared bed or beds. Rhododendrons, Azaleas, and Kalnias, would grow amongst Heaths, but they would be very incongruous, and, besides, would shade the lower branches of the Heaths too much, and thus injure their figure and beauty. With these preliminary cautions, I now proceed to give

GROUP 1ST.—HARDY HEATHS FROM THREE TO FOUR FEET HIGH.

Erica arborea; white. Native of the South of Europe. February to June.

E. arborea squarrosa (Squarrose); white. South of Europe. February to June.

E. arborea stylosa (Long-styled); white. South of Europe. February to June.

E. Mediterranea (Mediterranean); purple. Portugal. March to May.

E. umbellata (Umbelled); purple. Portugal. May to July.

E. viridepurpurea (Green and purple). Portugal. May to August.

The three Arboreas being all white, would form a centre with the purple-coloured species around them. This tall group should, of course, be planted in the centre of the plot of ground set out as a Heathery.

GROUP 2ND.—HARDY HEATHS TWO FEET HIGH.

Erica ciliaris (Fringed); purple. Cornwall. May to September.

E. multiflora (Many-flowered); pink. France. June to November.

E. multiflora alba (White). South of Europe. June to October.

E. ramulosa (Small-branched); purple. South of Europe. June and July.

E. ramulosa rubra (Red). South of Europe. June to July.

E. stricta (Upright); purple. South of Europe. August to November.

E. vulgaris (Common); purple.

E. „ alba; white.

E. „ coccinea (Scarlet).

E. „ tomentosa (Downy); red.

E. „ flore-pleno (Double-flowered); pink.

E. „ spicata (Spiked); red.

E. „ Makiana (Makie's); pink.

E. „ variegata (Variegated); purple.

Britain. February to July.

This second group is more numerous and more hardy than the first. There are also a greater variety of colours, hence they will require more beds. There might be one bed of white, another of purple, another red, and, lastly, one of the pink or flesh-coloured varieties,—four beds, which should surround the centre or tallest group.

GROUP 3.—HARDY HEATHS ONE FOOT HIGH.

E. australis (Southern); purple. Spain. March to July.

E. tetralix (Tetralix); pale pink. Britain. June to August.

E. tetralix alba (White). Britain. June to August.

E. tetralix carnea (Flesh); flesh-coloured. Britain. June to August.

E. vagans (Wild or Wandering); pale pink. Cornwall. July to August.

E. vagans alba (White). Cornwall. July to August.

E. vagans tenella (Slender); red. Europe. July to August.

E. stricta minima (Least-upright); purple. Europe. July to August.

This third group contains some beautiful varieties. I think the *Tetralix alba* the very prettiest and most beautiful of all our native Heaths. I once found it wild myself, when on a plant-seeking excursion on Black Moor, near Harrogate, in Yorkshire. The *E. australis* is so handsome that it is often grown in pots for the greenhouse. This group should be arranged similarly to the second.

GROUP 4TH.—HARDY HEATHS HALF-A-FOOT HIGH.

Erica carnea (Flesh-coloured); pale pink. Germany. January to April.

E. carnea herbacea (Herbaceous); pink. Germany. January to April.

E. cinerea (Grey); purple. Britain. July to Sept.

E. cinerea alba; white. Britain. July to September.

E. cinerea atropurpurea; dark purple. Britain. July to September.

E. cinerea rubra; red. Britain. July to September.

E. cinerea carnea; flesh-coloured. Britain. July to September.

E. vulgaris decumbens (Lying-down); red. Britain. July to September.

This fourth group completes the series. The *E. carnea* is well known, on account of its being the first Heath that flowers. It is grown largely in pots near London for Covent Garden market.

The grey Heaths are pretty, tiny plants, and when in bloom very beautiful.

It will be observed, that some one or other of the Hardy Heaths are in flower almost all the year, which cannot be said of any other tribe of plants.

They may be all increased by laying down the lower branches in spring, and covering them with an inch or two of heath-mould or sandy peat. These layers will root well in twelve months, and may then be cut off the old plants and planted in nursery-beds rather deeper than the roots. They should be trimmed in early in spring, to form nice, snug bushes during the summer. Many of the dwarf kinds may be increased by taking them up, and dividing them into three or four plants.

T. APPLEBY.

ADVICE TO YOUNG GARDENERS.

(Continued from page 219.)

IN writing for the benefit of the young men in my profession, I have endeavoured to point out the steps each ought to take to obtain a knowledge of his business; his conduct to his employers, his fellow gardeners, and the men under him in any garden he may have to manage. I have also hinted at his saving from his wages a sufficiency to sustain him in a state of independence in his old age; with some remarks on marriage, warning him not to enter into that state till he has a fair prospect of providing for a family. I am happy to find my advice has been appreciated, and, I trust, acted upon by many of my young friends. There remain only a few general remarks for me to make, which will conclude the series of advice. I have written solely to guide young gardeners through their lives, and thus render them more valuable as servants, and, consequently, happier, contented, and wiser men. And here let me do justice to my fellow-gardeners. I am proud to bear public testimony to their character in general. I know no other class of men more respectable in their general conduct, their personal cleanliness, dress, and behaviour. It was always so, in a great degree, but it is still more so now. Gardeners have kept pace with the times, and are, I trust, advancing in the scale of society. Books for their especial instruction, written by men who are either gardeners themselves, or have a great taste for that art, are constantly issuing from the press. Periodicals, too, are not wanting to keep the spirit of advancement in progress; so that it is the gardener's own fault if the profession does not keep a-head of all others in these railroad days. I, therefore, say to my brethren, do not sleep at your post; but continue perseveringly in improving your skill in your business, your position in society, and keep up your character as steady, industrious, well-behaved, and honest men. Whenever you are tempted to swerve from the high line of duty, remember not only your own loss, if you give way to foolish indulgences and wicked courses, but also the stain you will cast upon your class. You may be justly proud that you are a gardener, for no class of men that have to work for their bread stand higher in public estimation. I am happy to say, that in the criminal records of this country there are few gardeners who have broken the laws of their country, and brought on

themselves the punishment for crime. Resist, therefore, all temptation to do wrong in any shape that may come across the upright, even tenor of your way. Keep yourselves respectable, and you will be respected accordingly. There are two things that a gardener should avoid: the taking too much freedom with his employers or fellow-servants, and expecting more than his wages. Whenever a gardener indulges in those points it shows bad taste and low breeding. A low, ignorant man (I hope there are few such gardeners), if he receives any civility from his superior, immediately expects from him favours of a pecuniary kind. He thinks his superior ought to be a friend to him; perhaps will ask him to lend money; get him a better place; or, at least, advance his wages. These two points—familiarity and cupidity—are rocks on which many a gardener has split; lost his place and character, and hereafter became a railer against gardening, its patrons, and the world in general; in fact, a discontented, unhappy man, a bad husband, a careless father, and a worse than useless member of society, and a disgrace to his class. Beware, then, of familiarity. A well-informed man never obtrudes his affairs on others, neither is he inquisitive or impertinently curious in prying into the circumstances of others. Let self-respect guide him in his behaviour to both superiors, equals, and inferiors. The same principle will guide him in asking for or receiving favours. The wisest of men said, "He that hateth gifts shall live." How difficult to practice is this self-denial. Let self-respect rule, and the difficulty vanishes. Let every gardener ask himself these questions:—Why should I receive this gift, or that favour, from this man, or that man? Will he not expect something more valuable in return? If this denying spirit was more acted upon it would check gross selfishness. Keep up mutual respect, soften the temper, and promote true friendship. A selfish man is a sort of terror to his acquaintances; they fear to be even civil to him, expecting, if they were so, that he would ask them for favours which they must refuse; and by so doing, subject themselves to ill-natured comments, and, perhaps, abusive language. I say, therefore, to every gardener,—Be content with your wages; live within your means; and be above receiving undeserved favours from any man, either gentle or simple.

There are, in every class of workmen, different capacities, or, in other words, one man is more clever than another. It is so in gardening. One man has ability to manage a great place, and another can manage a small one. Both are respectable in regard to moral character, and in that respect equal. But he who manages the small place would be very foolish to expect the same wages because he is equally steady, sober, and industrious; nay, if equally clever in his business, he would be to blame if he was not contented with what his employer was willing or could afford to give him. My advice would be, in such a case, if you do not feel satisfied with your situation, which you have agreed to manage for so much, tell your employer, in a respectful manner, the cause, and leave it, and try for a better. But, beware; this is a dangerous experiment. There are so many gardeners out of place, and so few vacant, that you might be months, nay, years, before you get another. "Better bear the ills we have than fly to others we know not of." It is a wise dispensation of Providence, that there are men of varied ability to fill up the wants of every class of society. I have known many honest, simple-minded gardeners filling single-handed places with great credit to themselves and satisfaction to their employers, and quite as happy and contented with their twenty shillings per week as their more fortunate brethren were with the eighty or one hundred pounds a year. I say, therefore, again, let every gardener be content in that state of life it has

pleased Divine Providence to place him in; do his duty manfully; and so conduct himself as to deserve the high character, as a man and a gardener, society has in general awarded to his class. And now, my friends, I heartily wish you every success and comfort, and shall always be glad to do you any service in my power.

T. APPLEBY.

ROUTINE WORK FOR AUGUST.

THE month of August being not unusually a dry, sunny one, a new order of things commences; all cropping now undertaken has for its object the welfare of another year; even the most of the things planted are not expected to become useful until then, except such as are intended for autumn purposes, as *Lettuces*, *Early Cape*, and some other *Brocolis*.

At the same time, much has to be done to render the present and future seasons abundantly supplied with vegetables and other products. A long period of dry weather is much against this, but being occasionally relieved by thunder-storms and the like, it would be well to take advantage of any change likely to be attended with benefit that way, and as late crops are often in as much request as early ones, we ought to provide for such by all the contrivances that can be adopted.

Potatoes in a young, or half-grown state, are by some regarded as a great luxury, and many dishes of *retarded* Potatoes have, no doubt, been vended for new ones. Our present chapter is intended to convey some hints how such retarding is accomplished, but giving, at the same time, some account of the other routine work which this period calls into requisition.

Though a crop of *Carrots* sown on the 1st of June may differ but little in October from those sown two months before, such is not the case with the various crops that require sowing in August, for there is a critical time for everything at this period, which the most experienced amongst us, now and then, get wrong in; for be it remarked, that the various crops of the *Cabbage* tribe are intended to flower naturally in the spring, and sometimes do when they have been sown too early! In fact, I may say they always do so, that we ought to time the sowing so as to have the best possible vegetable without its running to seed. This can only be accomplished by sowing at the right time. The same may be said of the *Cauliflower*, another of the *Cabbage* family. *Turnips*, though they may be sown at various times with a fair share of success, cannot well be sown later than this month; only, as the crop is intended for autumn and winter use, it ought not to be placed on the same footing as those which have an important office to perform in next year's cropping.

CELERY.—This will only require earthing up as it advances in growth; the mode of doing this at once is scarcely applicable in all cases, and in very dry weather it would be prudent to *run down a little* additional earth round the stems, and over the roots of all the crops of celery, merely to keep out the drought. The earlier crops, as those advancing fast into use, will now want earthing up for good, taking care, at all times, not to do it in such a manner as to bury the hearts or inner leaves. Dry weather is best for this purpose, and fine pulverised earth ought only to be used. A good soaking with manure-water at the root, before doing so, will be of great service to the plant.

CABBAGES.—This important crop, on which the cook reckons from the 1st of January to the last day of December, ought to be very carefully attended to at this season; and although, in the north of England, and late, cold situations, crops may be sown the last week in July, with a fair chance of their doing well, still it is

only in such places that it is advisable to sow so soon. The 12th or 14th of August will be found early enough in most places in the south; but it is advisable to sow a small quantity about a week earlier, and, perhaps, later than the specified time, planting out a few of each, so that at the coming season, should any mishap befall one lot, another may be useful. This was more especially the case this last season, wherein so many plots of Cabbage run away to seed entirely. At the same time, be it fully understood, that the best ground only ought to be used for this sowing; and although it might, with perfect propriety, be sheltered from any cold quarter by a wall or building, it must not, on any account, be shaded by trees; in fact, the secret of success lies in a late sowing being hastened on by good feeding and management; at the same time, such crops hardly endure the hard weather so well as more steady-growing ones. A good variety is also requisite—one that is not liable to run; and as each district has its own favourites, it is needless to mention names; but if the amateur be anxious that way, I will tell him that the earliest one in use here is the *Fulham* and *East Ham*; while one with only a local name, but an excellent Cabbage, is the largest; and another called the *Down-house* is about the best for general summer use. A few RED Cabbages are sown at each time, and the whole, under good management, ought to be planted in one plot, except the few for earliest use, which may be accommodated with a sheltered border.

SPINACH.—Notwithstanding the introductions of late years, the old long-leaved Spinach seems to be most esteemed at table; a considerable breadth of this, therefore, may be sown on some well-sheltered border, or it might do in the open square. Rows a foot apart, and the plants thinned a little when they come up, will do very well. Some portions of this ground will require protection in mid-winter, if the produce be wanted then, otherwise the severity of the season will retard the Spinach growing and otherwise spoil it. Ground not too rich enables it to survive the winter best.

ONIONS.—One or two sorts, including the *Silver-skinned*, ought to be sown about the same time as the Cabbages, and in an open situation, as dry as can be had; but if it be very much so at the time of sowing, watering and shading must be resorted to then in order to ensure germination. This crop, however, is not so much dependent on being sown exactly at a fixed time, but any time about the middle of the month will do under ordinary circumstances.

LETTUCES.—These must be sown every ten days, or oftener, as long as they will vegetate out-of-doors, which is seldom later than the early part of September. The hardy sorts are the best for late work, as the *Green Cabbaging* varieties, of which the *Hammersmith* may be regarded as the type. The *Brown Dutch*, another Cabbaging variety, may also be sown at the same time, and some of the *Brown Coss*; but the *Green* or *White Coss*, and the large *White Cabbaging* sorts, like the *Malta* and others, rarely live through the winter well; although I have raised one from the *Drumhead*, which survives pretty well, and is often the most useful spring Lettuce I have. A well-sheltered border must be had for them, and the plantations for early spring use ought also to be on such places. Ground too rich ought to be avoided for winter Lettuce. Better wait until the growing season arrives, and feed it with manure-water, which it drinks with avidity.

ENDIVE.—After the 1st of the month this vegetable is seldom sown, for as it is only regarded as a substitute for Lettuce, the original is allowed to take its proper place again. The *Batavian* is best for spring work, and may be sown at this time, as it has been done before-hand; the other may be tried, also, if thought necessary.

CAULIFLOWER.—In the north of England this is sown

by the 12th of August, and I have even known it do very well sown earlier than that; while in Devonshire it is sometimes not sown until October; but in the latter case it is undoubtedly under glass; at all events, it is certainly assisted at the latter time. I generally sow about the 1st of September, under as favourable circumstances as possible; if these be not to be had, I sow a day or two sooner, and as it is important not to lose this crop, I often sow in more places than one; but as this article will probably be dwelt on in another place, I shall say no more at present, but request the amateur to reserve a good place for it, and let the ground be some that has been dug some time, rather than fresh turned up. This remark is also applicable to the other crops as well.

J. ROBSON.

TRUTHS RELATIVE TO VAN DIEMEN'S LAND

(SURE are we that our readers will welcome as heartily as we did the following communication from our valued correspondent, "A Country Curate," whose Apiarian lucubrations so benefited and are so often referred to by our readers. He now holds a very responsible office in the Educational arrangements of the Colony).

A year-and-a-half having elapsed since my last communication to THE COTTAGE GARDENER, more than thirteen months of which have been spent in the colony, I may proceed to give you my impressions of the place; not with the view merely of amusing, as heretofore, such of your readers as were pleased to con my Apiarian lucubrations (though I have something for them, too, before I have done), but I shall give as truthful an account as possible of the soil, climate, advantages and disadvantages, inducements to emigrants (of that class, especially, who may be supposed to seek information in your pages), with a view both to benefit them and the colony likewise.

I remember well the frequent advertisements, which appeared in the various garden periodicals, inquiring for suitable places; and I have, also, reason to believe that many a young man, either just married or contemplating marriage, has obtained but very inadequate information to his wants or his wishes, as the result of his inquiries. To such, either young gardeners of every grade, from the would-be landscape gardener to the man of the spade or the pruning-knife—aye, and to the young day labourer, of sober and industrious habits, who is anxious to earn more than the weekly pittance, which at best is the end of his ambition at home—to all such, I say, I address myself. My character as a clergyman, filling a responsible position in the colony of Van Diemen's Land, will be a warrant that I shall write nothing but what I believe to be strictly true, and to be depended upon.

Perhaps it will be as well if I mix the *dulce* with the *utile*, and, partly from extracts from the colonial papers, partly from my own observations and experience, write *currente calamo*, leaving to every reader to cull the information to which his individual wants or wishes incline him.

My wife and I sailed from Plymouth early in September, 1853. Exactly three calendar months from the date of our boarding Green's noble vessel, the "Anglesey," within the Breakwater, we anchored, without accident, in Hobson's Bay, Port Philip, in excellent health and spirits.

We were not without gardening recreations at sea; for my natural love of experiment, and my desire to carry something with me as an acceptable and propitiatory present to the inhabitants of Van Diemen's Land, had induced me to order from Langelier (the celebrated grower of Pear-trees, in Jersey) twelve of the best varieties of this noble fruit, to be planted (seven months before I sailed, i.e. in March, 1853) in a large tub of richly-manured soil. These trees, grafted on the dwarfing system, had all made long shoots in the summer; their wood was well ripened, and they were in full vigour, when the Jersey steamer brought them to Plymouth in time for our departure. My tub of Pear-trees—a conspicuous object among our boat full of luggage—was safely hoisted on board, and straightway made fast to large ring-

screws let into the deck-boards on the poop in front of the "companion" stairs.

In spite of the Captain's predictions that one week of sea-air would "do" for my Pear-trees, they survived the voyage well—nay, actually grew in the tropics, and shed their leaves in the southern regions, as on land; and, with one exception (the *Beurré Rance*), which died about two months ago, are all thriving, as English trees know how to do in this splendid climate.

The only precaution I took on board was, during windy weather, and generally at night-time, to cover the tub with a tarpaulin cap, tied carefully at the neck of the cap, or bag, round the upper stave of the tub. The cap was prevented from smothering the trees by resting on strong wire rods which arched over the dwarf trees. A judicious pruning, from time to time, kept the shoots from trespassing the narrow limits of their range.

To prevent "coals" from being brought to "Newcastle," I shall here mention the names of my eleven surviving trees:—1. *Winter Nelis*. 2. *Louise Bonne of Jersey*. 3. *Chau-montel*. 4. *Marie Louise*. 5. *Gracioli*. 6. *Van Mons' Léon Le Clerc*. 7. *Beurré D'Amanlis*. 8. *Beurré D'Arembert*. 9. *Passe Colmar*. 10. *Passe Colmar Doré*. 11. *Colmar D'Ardenpont*.

After I had been in the colony some months, I found that some of these Pears had already been introduced, as the *Winter Nelis* (a great bearer here), and I think the *Marie Louise* and *Passe Colmar*; and there was no lack of other good Pears in the island; as, for instance, *Gansel's Bergamot*, *Bon Chrétien*, *Swan's Egg*, &c. In some parts of the country Pears are said to be a precarious crop owing to the spring frosts; but exposed as we are to these, in the part of the country where I am located (forty miles inland), we have first-rate crops this, as last, summer. Young trees, it is not unlikely, may suffer; but, when well-established, and not too closely pruned, they form their own protection from the frosts. And this I believe to be the case with most fruits, save those which are essentially tender, like the Vine. These summer frosts are the gardeners' most formidable enemy, especially in the Potato ground; but they are only known inland—along the coast, and both at Hobart Town and Launceston, they are almost entirely unknown—a d there everything grows with a tropical growth. I have heard it said, for instance, that a cutting of a *Fuchsia*, a finger's length, will there cover a house in one season. Indeed, this growth of the vegetable world is everywhere astonishing; the native trees, some of them, never cease growing; and English trees, in spite of their annual rest, here, as elsewhere, grow in proportion. I witnessed only the other day, not nine miles hence, a curious instance of this growth in an Elm cutting three inches long, which, in three years from the date of its insertion in the ground, had grown to the astonishing length of twenty feet! It is true, no side branches had been allowed to shoot, and its growth in length (not height, for it would not stand erect) was, therefore, unnatural; but I doubt if any part of England, or of central Europe, could have produced a like growth. All cuttings take here readily; sticks for marking seed invariably grow, and mostly root; Pear and Apple cuttings included, if put into the ground sufficiently early in the year, *i.e.*, on or before the rainy season in July and August.

It is surprising to note the progress which the colony has made in the march towards settlement and civilisation. In some places you might suppose yourself in England, from the signs of cultivation, and the evident opulence, as well as substantial comfort, which everywhere surround you. Good roads are in course of construction every year, and in all directions, besides the old-established roads of convict construction between Launceston and Hobart Town. On the outskirts of the settled districts, and to remote places, the so-called roads are bad enough—*quagmires* in some parts, and dangerous to vehicle and driver; but these are fast improving in all directions. In the summer-time travelling is easy enough; *pleasant* it can never be called on any road, good or bad, owing to the dust which coats the road ankle-deep. This is occasioned by the summer droughts, which, throughout January and February, the latter portion of December, and the early part of March, prevail, more or less, every year. During these three months Van Diemen's Land should not be visited by strangers, nor should emi-

grants arrive, else a disappointment will be their portion. At all other times the unanimous voice would pronounce this a glorious country—a fine, clear sky; bracing air; and inspiring breezes for the most part prevail. The autumn is beautiful; winter seldom colder than would be pronounced agreeable by the most querulous of English complainers; and the spring is a charming season;—even when rain falls, as it sometimes does, "and no mistake," for a couple or more weeks together, it has yet its intervals of warm, sparkling, sunny weather; and, in a country where the sun is decidedly predominant at all seasons, is seldom otherwise than hailed at its coming, and regretted at its ceasing. Nor is the summer without its share of advantages; for hot as the sun always is by day, the nights are invariably cool, and the mornings and evenings deliciously refreshing; and the cool breeze, which generally arises after ten o'clock, tempers even the mid-day heat, so as to make it feel seldom oppressive. When I speak of the drought, too, let me not be mistaken: I use the term comparatively when writing for English readers. The Sydney and Port Philip settler would smile at our so-called "droughts" here, with such seasons as the present fresh in his experience, when water sells for gold in Sydney, and the supplies are withheld for twenty-two out of the twenty-four hours! In fact, our neighbours think and speak of Van Diemen's Land as Englishmen talk of Ireland; but verdant as it is by comparison with the neighbouring colonies, this island must not be spoken of in the same breath with the "Emerald Isle" for verdure. Not, be it observed, that Van Diemen's Land is not green where English trees and grasses are cultivated; but the native grasses, as well as the native foliage, still generally prevailing over the country, are olive-green at best, in the midst of the rainy season.

The wealthier settlers (who drive their English carriages with pairs of horses) are now, for the most part, anxious to plant European trees around their dwellings. Twenty-five years' growth of Oak and Elm, in some places, bear witness to the taste and early forethought of a few; but such instances are rare, save where the palate was to be gratified—certainly, of fruit-bearing trees there is no lack, and their produce is enormous. While on this subject, I may mention that Tasmanian fruits, as might be expected, in this sunny and exciting climate, far exceed in size and flavour their English kindred. Flowers, too, of all kinds, blow here as they do nowhere in England; especially favourable for all bulbs, including Cape bulbs and Roses, is the soil and climate—not so, perhaps, for annuals, which require a greater continuity of summer showers to make them flourish; but bulbs of all kinds grow and bloom magnificently with hardly any care. For show of bloom, of native and European shrubs and flowers (and many of the native plants are exceedingly beautiful), I do not hesitate to say Van Diemen's Land would carry off the palm against any land situate within the temperate zone. Some of the gardens that I have been privileged to see have delighted me beyond measure; but a well-kept flower-garden is an expensive luxury in this country, owing to the cost of labour, which, in consequence, simultaneously of the discovery of gold in Victoria, and of the drain of our convict population in that direction (a good riddance in every other respect), has risen to an enormous extent, and continues very high, in spite of the commencing flow of emigration to these shores. But this leads me to the subject of emigration hither, which requires a distinct sheet to itself; and I shall couple together with it a consideration of the market prices for goods and produce of all kinds.—A (LATE) COUNTRY CURATE.

HOBART TOWN RETAIL MARKETS.—January 9, 1855.

		s.	d.
Wheat	per bushel	13s. to 13	6
Cape Barley	"	7s. to	8 0
English ditto	"		10 0
Oats	"	7s. to	8 0
Peas	"		20 0
Beans	"		20 0
Tares	"		1 0
Flour	per ton	£34 to 36	0 0
Hay, loose	"	£8 to 10	0 0
Ditto, pressed	"	£12 to 13	0 0
Straw, ditto	"	£8	0 0

Potatoes	per ton	£13 to 15	0	0
Onions	"	£25 to 30	0	0
Cabbages	per dozen	2s. to	3	0
Cauliflowers	"	"	4	0
Carrots	per doz. bunches	"	3	0
Turnips	"	"	3	0
Apples	per bushel	20s. to	25	0
Fowls	per couple	6s. to	7	0
Ducks	"	9s. to	10	0
Geese	each	"	10	0
Turkeys	"	10s. to	11	0
Eggs	per dozen	2s. to	2	3
Butter	per lb.	2s. to	2	6
Port Arthur Coals	per ton	£2	10	0
Schouten Island ditto	"	"	2	0
Douglas River ditto	"	"	3	0
Wood (she-oak)	"	"	2	0
Ditto, gum	"	"	1	15
<i>Butchers' Meat.</i>				
Beef, prime	per lb.	6d. to	7	
Mutton	"	4d. to	7	
Veal	"	"	10	
Pork	"	"	1	10
Lamb	per quarter	3s. to	5s.	
Price of Bread, 7½d. 2 lbs. loaf.				

NOTES FROM PARIS.—No. 14.

VERSAILLES.

A WEEK or two ago, I was invited to join a party going to the renowned Chateau of Versailles. I had thus an opportunity of seeing the grounds at a time when gardens have all the charm of freshness and beauty. It is not my purpose to speak particularly of the Chateau or palace, and, indeed, though an account of it might be suitable to your readers, all I could say in a short letter would not give the slightest idea of its present grandeur, or its past history, as a museum of all that is rich and rare in painting and sculpture. We have nothing in England that can be compared to the Louvre in Paris; but there is nothing in France, or, perhaps, any other country in the world, that can equal Versailles, as a repository of art. Here, especially, the history of France, during several centuries, is illustrated on the most magnificent scale. At least three hours are required to go through all the galleries, and obtain just the slightest glimpse of the principal paintings. You may well believe, then, that after making every possible return for the attentions of my friends, who were always ready to explain what I could not well understand, after I had done full justice to the great Masters, I was glad enough to get into the open air, and gaze awhile on the green lawn and clumps of flowers and evergreens which embellish the immediate vicinity of the Chateau.

The arrangement, or style, of the figures is that which looks very well on paper, or when worked out in woven fabrics, and the decoration of houses; but, when worked out as a flower-garden, makes but an indifferent appearance. Worked out by an artist, these figures are very beautiful, because they are on such a scale as to be readily embraced by the eye, and the direction of the lines only is studied. But worked out by a gardener, and with the same features preserved, they have an appearance which is more frequently ridiculous than ornamental; because the eye cannot embrace their whole outline, and because not the lines only, but the intervening spaces, have to be studied. The two principles are reversed, or, more correctly, perhaps, the one is the converse of the other. The skilful garden designer will not lose sight of this fact; for his real *forte* is to suppress the sharp angles of the intervening spaces, and yet preserve the leading features of the figure, which is formed by the lines.

It is clear that the flower-garden in question has been laid out by an artist, and that he has been guided only by the rules of art. The intervening spaces are generally sharp, and many of the walks lead nowhere, and, indeed, have been formed without the slightest reference to the real object of a walk. Sometimes a gradually dwindling line of circles, or beads, is carried round another figure about ten

feet, and the beads are formed of circular patches of turf, the largest some twelve or fifteen inches in diameter; the rest diminishing gradually to the end, where they are about the size of one's palm. Then, again, there are curved lines, or figures, which curl up, as it were, at their extremity in a gyrate manner, like the young shoots of a Fern. Often, too, the intervening ground, intended as the flower-bed, is formed, necessarily, in the most fantastic manner, and it is fortunate when the flowers and plants grow up to conceal the numerous asperities incidental to this species of design, which is full of what, if I mistake not, is well known by the gentlemen of the profession under the designation of *Crinkum-crankum*.

People are not allowed to walk in this garden, and, indeed, it would be difficult to find one's way in it, at least, guided by the walks, such as they are. The intention has, perhaps, been to show a sort of carpet work, viewed from the windows of the long "galleries," as the rooms of such places are called here; but it is questionable if this object could be well attained under the circumstances; and even if attained, it is certain that it would not look half so well as a series of more natural figures. If it had been wanted to have something telling and gorgeous, this would have been effected more readily by giving the ground a sloping form, and filling it with circles of showy flowers, after the model of a bouquet. This arrangement, with one of the large fountains well elevated in the centre, would have been what the French call "magnifique." As it is, the design is only fantastic, and the plants are common-place enough. There is nothing to give effect, if we may except the Lilac, with which the ground is freely interspersed; the bushes being from five to seven feet high, and trained as standards, with heads five feet in diameter. But Lilac is only in flower for a short time in the early part of summer, and so much of one thing cannot be so agreeable as a well-chosen variety. Of course, these Lilacs are always kept trimmed, so as to have a regularly round or spherical form. There is no accounting for tastes, and it would be difficult to explain the fondness of the French for this style of training their trees, except on the principle of human nature, which is commonly understood by the expression, "force of habit." But that is not all, there is a want of what we call *cultivated taste*, in the absence of which people glory in contortions and eccentricities. The Chinese ladies, as we are told, must, to be quite "finished," have feet no larger than those of a little child. Some bird fanciers are fond of giving their favourites artificial combs and horns; a certain description of dog is never considered *en grande tenue* till it is properly clipped, leaving just a little tuft at the tip of the tail, and a like ornament at the joints of the legs. In France, and elsewhere on the continent, certain kinds of trees are only seen in the form of cones, cubes, pyramids, and obelisks. Sometimes they assume more whimsical forms which do not readily admit of description. At Versailles, there is a long row of large evergreens trimmed and cut in a variety of ways; these are pointed out as being exceedingly curious, and as having been kept up with great pains for many years. In walking through the village, too, I found the Elms and Limes cut in a similar manner; and in order to be quite *plumb* with the sides of the grounds in which they were growing, some of them have only one or two branches at one side of the trunk, all the others having been cut clean away. There are two long rows of tall Elms at the sides of the road leading to the village, and instead of having wide-spreading branches as shade from the hot sun, or shelter from the blast, they are kept trimmed close to the trunk, as far up as possible, so as to be quite "plumb" with the sides of the road; but the branches at the side are allowed to grow, with the intention, apparently, of forming a kind of hedge-row. These trees are some sixty feet high, and the road is wide and good; but the stiff evenness which is maintained, and the bare mutilated trunks, are anything but agreeable.

The grounds at the Chateau may be shortly described, as a neglected wood, with long, spacious avenues, and broad walks with high hedges, formed of young, lanky trees. Except in trimming these hedges, the forester of the domain has evidently imbibed some sentiment akin to that of the poet who wrote, "Woodman, spare that tree." Here, however, the feeling of veneration has been carried much further than the poet required; for the young trees,

which seem to have grown up from seed sown broad-cast, are left to scramble to the light as best they may.

But notwithstanding the false principles which regulate some things here, Versailles is a fine place in its way. It is not much like Kew, or Kensington, or Chiswick. It has not the captivating beauty of English park scenery; and though it is not wanting in lawns, such as they are, Washington Irving's picture of English landscape gardening is not applicable here. There is not the solemn pomp of groves and woodland glades, with the deer trooping in silent herds across them; the hare bounding away to the covert, or the pheasant suddenly bursting upon the wing; the brook taught to wind in natural meanderings, or expand into a glassy lake; the sequestered pool, reflecting the quivering trees, with the yellow leaf sleeping on its bosom, and the trout roaming fearlessly about its limpid waters; while some rustic temple, or sylvan statue, grown green and dark with age, gives an air of classic sanctity to the seclusion. There is little or nothing in this way to be seen at Versailles. On the contrary, everything seems to have been done with the rule and compasses. With the exception of some flower clumps near the Chateau, all is even, stiff, and formal. And though there is much that may be called grand, there is not the grandeur of nature assisted by art. The style is only in keeping with the rich fantastique costumes of a by-gone age, or the rigid etiquette of an ancient court. Very spacious and noble, indeed, must these long, straight avenues have been in the days of *Louis Quatorze*, for instance. One might imagine that luxurious monarch, with his queen, prancing gaily down the broad grass-way, attended by grand marshals, barons, dukes, foreign princes and ambassadors; the horses richly caparisoned; the ladies and cavaliers covered with gold and diamonds, costly velvet, and lace, and nodding plumes. Now, times are changed; and we see everybody—even the great—arrayed only in simple and unostentatious bourgeois. The brilliant cavalcade is no longer seen at Versailles; and there is now but little of the royal laugh or courtly chatter for the echoes of her stately pollards. But still, nothing can equal the bronze and marble vases, and statues of Colossal dimensions, with which the ground is freely studded in every direction; and nothing can surpass the magnificent fountains which meet the eye at every turn, and send their refreshing spray far into the warm atmosphere. The fountains, of course, are only in full play on certain days, and the most attractive of them only play for about twenty minutes or half-an-hour; but a vast supply of water is thrown out during that short time. The public are generally informed a day or two beforehand when the fountains are to be in full play, and thousands of people go to see them. The smaller ones begin about two o'clock, and the water keeps gradually rising higher and higher until it attains its greatest altitude. About four or five o'clock, after expectation has become suspense, the large fountains—called here, *Les Grandes Eaux*—suddenly send forth their liquid columns, to the great delight of the motley multitude gathered round the spacious basin. This is always the grand *finale* at Versailles. Here the ground has the form of a vast amphitheatre, and there is plenty of room for everybody. At the time of my visit there might be about 10,000 persons present, all in their holiday attire, and as happy as if they all had a respectable balance at their banker's, as Wilkie would have said. A *dénouement* is always more or less exciting. The moment of unveiling a statue is more *piquant* than the view of it. One feels an inexpressible thrill when the head of a grand procession just rounds the point which brings it into view. The best of the sight at Versailles is when the fountains just begin to play, and, accordingly, people flock to this part of the grounds, and take up their places, long before the hour arrives for turning on the water. Sometimes one or two of the jets begin to throw out. Then there is a wonderful commotion, followed by a death-like stillness, and every eye is strained. But old Neptune, who seems, from the prominent position he occupies, to be at the head of the management, is not quite ready, and these isolated ebullitions are suppressed. Then, just when people have made up their minds to wait half-an-hour longer, all the jets suddenly throw out, the water rising, in some places, perpendicularly to the height of thirty and forty feet; in others obliquely, and falling in graceful curves into the basin again.

In about half-an-hour more the fountains have ceased to play; the Chateau has been cleared; the people are nearly all gone; the sentinels who have been guarding the flower-beds have been relieved, and Versailles is again in magnificent solitude.—P. F. KER.

DIELYTRA SPECTABILIS SEED.—CLOTH OF GOLD ROSE.

As Mr. Beaton has spoken, at page 270, of the raising of plants from seeds of *Dielytra spectabilis*, a packet of which I had the pleasure of sending him; and as he appears to have been unsuccessful, I shall be glad, if he wishes it, to forward him a few more seeds of this year's growth. At the same time, I beg to state that I have two strong plants from the same lot of seeds of which I sent him a part, and a third, self-sown, from the parent plant.

As to seeding the old plants, I find that all seed equally, though not freely, wherever their situation may be. I have tried in vain to make it seed more freely both by opening the corolla and by applying its own pollen as well as that of other species.

In reply to the question of "Verax," at page 279, I beg to state that I have a plant of the *Cloth of Gold Rose* corresponding in every respect, both as to age, height, situation, and bloom, with his; it has become bare at bottom, but, for his satisfaction, I may tell him that I cut away, last winter, the whole of the wood for about ten feet from the top, and that this summer it has thrown out, close to the ground, numbers of strong, young shoots, nearly all of them covered with bloom, and it is now well clothed. The blooms are very dissimilar in colour, some being much darker than others.

The seed of *Dielytra* was sown last year, and did not come up till this spring.—A. R., Bromley Common.

I HAVE just read your article on the *Dielytra spectabilis* seedling in this week's number of THE COTTAGE GARDENER. It so happens, that I wrote to the Editor offering some fresh seed, which I will now enclose, taking it for granted they will be acceptable.

I have a strong plant, which I bought three years ago this last spring, in a pot, in full flower. After the flowers had faded I planted it out in a piece of hollow Elm. It sent up some fresh flower-shoots, but did not seed; it remained in the Elm all the winter with only a covering of ashes. Last year it flowered beautifully, and ripened its seed as if it were a matter of course. Some of the seeds I sent you; but I do not think it could have been improved by my process of drying, which I, in my ignorance, adopted—that of placing the pods in the eye of the sun in a window for a fortnight, if not longer, before you had them. A gardener in the parish, to whom I gave some, raised five plants, which are tolerably strong; all others, myself included, failed to raise any. The seed I now enclose was picked on the 16th; and I have sown some which, perhaps, may show more vitality than last year's sowing.

I might as well tell you the history of a seedling the gardener gave me. To prove its hardy nature, I planted it out in the border, and in a few days, whether from the attack of a slug, or an accidental bruise, it was prostrated. I mourned for it as gone; but in the course of a week or so a little shoot was visible, and it is now looking healthy, though quite unprotected. My friend, the gardener, has his seedlings still in pots in the conservatory.—E. H. C., Kingsbridge.

THE ROYAL AGRICULTURAL SOCIETY'S EXHIBITION AT CARLISLE.

THIS Exhibition continued from the 19th to the 27th of July.

To give a general idea of the extent of the show, we may mention that the implement yard covered a space of five acres, and occupied about two-thirds of the whole ground. There were 120 entries of machines, embracing almost every agricultural mechanical application that ingenuity has yet discovered. Many, of course, were familiar to every one, but

there were some which deserve a special description. *Boydell's "Steam Horse"* elicited a substantial mark of approval from the judges, but this had reference only to the invention of the "portable railway," and its application to the wheels. It is not thought that the machine in its present shape will answer. There is room for great improvement, but it is hoped that the discovery will have an important effect upon farming operations. *Usher's Steam Cultivator* seems to have failed to accomplish its mission in Carlisle. It never reached the trial ground. Its complex machinery, and the apparent difficulty of locomotion, tells greatly against it. It was rescued from the slough in which it fell; but beyond a few trifling experiments of a doubtful character outside the trial yard, nothing was done with it. By general consent it seems to have been set down as more ingenious than useful.

The *Cattle* show possessed attractions which effectually drained the implement department of its visitors. Amongst the most attentive people there was the Baron Usedom, the Prussian Ambassador, and Colonel Malcolm, his brother-in-law. His excellency was accompanied through the sheds by Captain Ball, one of the judges, who was a juror at the recent great exhibition at Paris, and carried off two gold prize medals as an exhibitor of stock, besides the handsome gold medal presented to him in his capacity of juror. Accompanied by the gallant captain, Mr. Colquhoun, Mr. Hudson, the secretary to the society, Mr. H. Wilson, one of the stewards, and Professor Finlayson, the baron, went round the show ground, examining critically the various specimens of live-stock. Captain Hall and Professor Finlayson gave some very interesting criteria and explanations to assist the party in their judgment of what they saw.

As we had anticipated, the display of *Horses*, especially of Clydesdale, from Scotland, and the northern parts of England, was unprecedented in the society's awards. A large number of *Suffolks* afforded the connoisseur an opportunity of comparing them with others. The horses from the locality, and especially the stallions, were most excellent. Some shown by Mr. Ferguson, of Harker Lodge, eclipsed anything we had ever before seen. Altogether this class was very good, and exceeded all the rest in number and variety. In addition to the agricultural horses, there was a large number of good hunters and coaching horses.

There was scarcely ever a better display of *short horns*. In this important branch of stock breeding, Mr. Booth and Mr. Townley maintained their celebrity. Lord Feversham's splendid red and white bull "Gloucester," from the late Earl of Ducie's stock, attracted great attention. Though second here, it stood first in Paris. It succumbed to Mr. Booth's "Windsor," than which there was not a better animal in the yard—none so soft and mellow, and Lord Feversham's came next to it. The length of "Windsor" is five feet three inches; from the hock-bone to the tail it measures twenty-one inches in length, and seven feet four inches in girth, not so much, it was said, by one foot its measurement last year.

The show of *Herefords* and *Devons* was particularly fine, the two great rival breeders, Mr. P. Turner, of Leominster, and Mr. Quartly, of South Molton, exhibiting unexceptionable specimens.

The *Sheep* were not so numerous as at the last exhibition at Lincoln, but if possible the quality generally was better. The other departments of the exhibition were equally well stocked.

The *Poultry* were very good, though comparatively few. The Dorking and Spanish fowls, and the Aylesbury Ducks were generally superior.

Class 1.—DORRING FOWLS.—Chicken of 1855.—First prize, to H. D. Davies, of Spring Grove House, Hounslow, Middlesex. (Coloured.) Bred by exhibitor. Second prize to Miss Bell, of Woodhouselees, Canonbie, near Carlisle. (Coloured, single-combed.) Bred by exhibitor. Third prize to G. A. Gelderd, of Aikrigg End, near Kendal. (Coloured.) Bred by exhibitor. Fourth prize to G. A. Gelderd, of Aikrigg End, near Kendal. (Coloured.) Bred by exhibitor.

Class 2.—DORRINGS MORE THAN ONE YEAR OLD.—First prize to H. D. Davies, of Spring Grove House, near Hounslow, Middlesex. (Coloured.) Second prize to G. A. Gelderd, of Aikrigg End, near Kendal. (Coloured.) Cock bred by J. J. Wilson, of Kendal; breeder of hens unknown. Third prize to John Hitchman, M.D., of Mickleover, near Derby. (Grey.) Bred by exhibitor. Fourth prize to Thomas Ullock, of Quarry Howe, near Windermere. (Silver or grey.) Bred by exhibitor.

Class 3.—DORRING COCKS OF ANY AGE.—First prize to Mrs. Thomas Townley Parker, of Astley Hall, near Chorley, Lancashire. Bred by exhibitor. Second prize to D. Harrison, of Singleton Park, near Kendal. (Grey or coloured.) Bred by S. F. Brett, of Market Rasen, Lincoln.

Class 4.—SPANISH FOWLS.—First prize to H. D. Davies, of Spring Grove House, Hounslow, Middlesex. Second prize to William Lightfoot, of Shield Field, Newcastle-upon-Tyne. (White-faced black.) Bred by Captain Hornby, R.N., of Knowsley Cottage, near Prescott. Third prize to Miss Bell, of Woodhouselees, near Canonbie, Dumfries. (Black.) Bred by exhibitor. Fourth prize to William Lightfoot, of Shield Field, Newcastle-upon-Tyne. (White-faced black.) Bred by exhibitor.

Class 5.—SPANISH COCKS.—The prize to Jas. Dixon, of North Park, Horton, near Bradford. (White face.) Bred by John Mills, of Obenden, near Halifax.

Class 6.—COCHIN-CHINA FOWLS.—Chicken of 1855.—First prize to Mrs. Mary Parker, of Coalstaith, near Brampton. (Cinnamon and Buff.) Bred by Mr. Emery Kempston, Bedford. Second prize to Thomas Blaylock, of Botchorby, near Carlisle. (Buff.) Bred by exhibitor. Third prize to George Dobson, of Fox-lane, Whitehaven. (Buff.) Bred by exhibitor. Fourth prize to G. A. Gelderd, of Aikrigg End, near Kendal.

Class 7.—COCHIN-CHINA COCKS OF ANY AGE.—The prize to G. A. Gelderd, of Aikrigg End, near Kendal. Bred by Earl Ducie, of Tortworth Court, Gloucester.

Class 8.—BRAHMA POOTRA FOWLS.—The prize to H. D. Davies, of Spring Grove House, near Hounslow, Middlesex. (Grey.)

Class 9.—GAME FOWLS.—The first prize to C. R. Titterton, of Snow Hill, Birmingham. (Black-breasted Red.) Breeder unknown. Second prize to Robert Pickthall, of Mint House, near Kendal. (Black-breasted Red.) Bred by J. K. Hodgson, of Ulverston. Third prize to William Ellison, jun., Low Sizergh, near Milnthorpe. (Duckwing Greys.) Bred by William Wilkinson, of Brigstern, near Milnthorpe.

Class 10.—GAME COCKS OF ANY AGE.—The prize to Robert Pickthall, of Mint House, near Kendal. (Black-breasted Red.) Bred by J. K. Hodgson, of Ulverston.

Class 11.—HAMBURGH FOWLS (Golden-pencilled).—First prize to D. Harrison, of Singleton Park, near Kendal. Cock bred by exhibitor, one hen bred by Miss Walker, of Clipstone Rectory, Northampton, other hen bred by Rev. R. Pulleine, of Kirkby Wiske Rectory, Yorkshire. Second prize to James Fletcher, of Stoneclough, near Manchester. Bred by Joseph Whittington, jun., of Wotton Waven, near Henley-in-Arden.

Class 12.—HAMBURGH FOWLS (Silver-pencilled).—First prize to Henry Sharp, of Mill Lane, Bradford, Yorkshire. Breeder unknown. Second prize to James Dixon, of North Park, Horton, near Bradford.

Class 13.—HAMBURGH FOWLS (Golden-spangled).—First prize to James Dixon, of North Park, Horton, near Bradford. Second prize to James Dixon, of North Park, Horton, near Bradford.

Class 14.—HAMBURGH FOWLS (Silver-spangled).—First prize to Henry Beldon, of Prospect Place, Eccleshill Moor, near Bradford. Cock bred by Thomas Holmes, of Baildon; hens bred by W. Ludlam, of Bradford. Second prize to James Dixon, of North Park, Horton, near Bradford.

Class 15.—MALAY FOWLS.—First prize to William Lort, of Great Heath, Tenbury, Worcester. Bred by exhibitor. Second prize to Henry Bolckow, of Marton Hall, near Middlesborough, Yorkshire. Breeder unknown.

Class 16.—POLAND FOWLS.—First prize to George C. Adkins, of West House, Edgbaston, near Birmingham. (Silver-spangled.) Bred by exhibitor. Second prize to George C. Adkins, of West House, Edgbaston, near Birmingham. (White-crested Black.) Breeder unknown. Third prize to Henry Bolckow, of Marton Hall, near Middlesborough, Yorkshire. (Silver.) Breeder unknown.

Class 18.—GESE.—First prize to Henry Ambler, of Watkinson Hall, near Halifax. (Grey Toulouse.) Bred by exhibitor. Second prize to D. Harrison, of Singleton Park, near Kendal. (Grey cross-breed.) Bred by Mrs. T. Townley Parker, of Astley Hall, near Chorley. Third prize to Henry Ambler, of Watkinson Hall, near Halifax. (White Emden.) Bred by exhibitor.

Class 19.—AYLESBURY DUCKS.—First prize to H. D. Davies, of Spring Grove House, near Hounslow, Middlesex. (White.) Bred by exhibitor. Second prize to H. D. Davies, of Spring Grove House, near Hounslow, Middlesex. (White.) Bred by exhibitor. Third prize to G. A. Gelderd, of Aikrigg End, near Kendal. Bred by exhibitor.

Class 20.—ROUEN DUCKS.—First prize to John K. Fowler, of Prebendal Farm, Aylesbury, Bucks. (Pure.) Bred by exhibitor. Second prize to John Kersley Fowler, of Prebendal Farm, Aylesbury. (Pure.) Bred by Mr. Punchard, of Haverhill, Suffolk. Third prize withheld.

Class 31.—DUCKS OF ANY OTHER BREED.—First prize to James Dixon, of North Park, near Horton, Bradford. (Black East Indian.) Bred by exhibitor.

Class 1, 2, 4, and 19, highly commended. Also highly commended, Pens 29, 30, 42, 49, 68, 157, and 161.

DESTRUCTIVE BIRDS.

In your impression of the 24th of July, I perceive a paragraph, under the above head, in which the writer advocates a war of extermination against the feathered

tribes; calculates the saving to be derived from joining in his wanton *fun*; and, like many others who only argue from appearances, makes erroneous calculations of the amount of grain destroyed by these much calumniated creatures.

From the tone of his remarks, it is evident it will be useless to attempt to reason with him on the absurdity of his proposition, but in the hope of deterring others from following his example, and thereby reducing our crops and raising the price of our already too dear food, I beg to be allowed to draw attention to a few statements of the effects of destroying birds. By destructive birds, I conclude he means rooks, pigeons, sparrows, and bullfinches, which are the birds most spoken against by farmers and gardeners.

In the Duchy of Nassau, the peasants and landowners complained sadly and wofully of a rookery; so clamorous did they become, that orders were given for the destruction of the birds, and they were soon all but exterminated; but mark the sequel, the cockchafer increased so rapidly that their grubs destroyed the crops, and those who had denounced the rooks now begged that they might be protected and multiplied.

In a department of the south of France, where many dovecots were kept, mostly by persons who had little or no land, great complaints were made respecting the damage done by the pigeons to the crops, and the dovecots were suppressed; but though the pigeons eat corn when they can get it, yet three-fourths of the year it is not to be found, and they then subsist on the seeds of weeds. After the destruction of the pigeons the weeds increased so fast that the farmers could not keep the crops clean, and their losses were greater than at first, so that they were glad to have the Pigeons back, and passed stricter laws for their protection.

Most persons are acquainted with the result of the destruction of sparrows in one of the wheat-growing provinces of the Baltic, and where it was afterwards found advisable to import sparrows to replace them in keeping in check the insect pests. A gentleman farmer in East Kent, a notorious betting man, and great landed proprietor, laid a wager of one thousand pounds he would destroy every sparrow in his parish in a given time; he had most difficulty in killing an old cock sparrow, who could scarcely fly, but hopped cunningly about his pigsties; he, however, succeeded the night before the time expired, and he won his bet; but he lost double and treble the succeeding years by the damage done to his crops by insects.

Bullfinches are accused of pecking the buds off fruit-trees, which is substantially correct; but though I have for several years watched the results, they have always proved more advantageous than otherwise. The first time I took notice, I was living at a farm-house in Sussex. In the winter, the bullfinches came in flocks, and devoured every bud from the plum, cherry, and gooseberry trees; the snow below the trees and bushes was covered with the bud-cases, and not a perfect bud could I discover on the trees. I was dumb; my pet bullfinches! I was compelled to admit them destructive; but mark, the trees and bushes blossomed well, and we had excellent crops of fruit on those very trees that the bullfinches had stripped. The next winter the bullfinches rarely ever came near, though I watched anxiously for them; the trees blossomed that year even better than the previous one, but we had scarcely any fruit.

My present neighbour has a small patch of Gooseberry trees; in 1853 he had but little fruit; in the winter I found him waging a war of extermination against the bullfinches. I told him I did not believe they did any injury; he was quite angry, showed me his poor gooseberry bushes stripped of every bud; but that spring he had an excellent crop. I pointed to them, and asked what harm the bullfinches had done; he replied, he would not kill any more bullfinches.

Chaffinches, too, in early spring, pull up and destroy many of the young peas, radishes, and cabbage, while in the seed-leaves; but if gardeners would only consider the immense amount of good they do throughout the summer in destroying caterpillars, they would guard their young seeds from the birds, and not destroy the birds.—B. P. BRENT.

THE WATER LILY.

THE *Nymphæa*, or Water Lily, has always been a great favourite in China. It is commonly called *lien-hoa*, and has rounded leaves, scalloped at the edges, and is fleshy, full of veins, and sloping to the middle; some swim on the surface of the water, others rise above it to different heights. They are of a tender green on the upper surface, rather darker underneath, and supported by long stalks spotted with black. The root of the Water Lily is long lived, it is as thick as your arm, and sometimes as much as twelve feet or fifteen feet long. The colour is pale yellow outside, and milk-white within; and it lies along the bottom of the water, or attaches itself to the clay by bunches of fibres, which spring out at various distances along it. From the middle of these fibres it sometimes sends out shoots which increase its growth, but it commonly grows at the two ends. The stalks of both leaves and flowers are pierced quite to the extremity by holes rounded like those of the root, and symmetrically arranged along them.

The flowers of the Water Lily have numerous petals, disposed in such a manner that when they are not completely open you might take them for large Tulips; afterwards they expand with a Rose-like form. In the middle of the flower is a large conical pistil, which becomes a rounded, spongy fruit, divided throughout its length into cells full of oblong seeds, enveloped in a kind of shell like the acorn, and composed, like it, of two white lobes, between which is the germ. The stamens are very delicate filaments terminating in violet coloured anthers.

The Chinese distinguish four kinds of Water Lily,—the yellow, the white, the red, and the pink; the three latter sometimes with single flowers, sometimes with double. This plant may be propagated by seeds, but more easily and rapidly by roots; it does not require any kind of culture, and there is nothing comparable to the effect produced by this splendid flower on the ponds and basins of China. It does not bud till towards the end of May, but its germination is very rapid, and its great leaves lying on the surface of the water, or raised majestically to various heights, form a covering of most exquisite verdure, the beauty of which is, of course, enhanced, when it is enamelled with flowers of various dyes. They are larger than Poppies, and their dazzling tints are beautifully relieved by the green leaves. The young Chinese poets are particularly fond of celebrating the beauty of the Water Lily gleaming in the moonlight, as the boats row about illumined by swarms of glow-worms and fire-flies.

The Water Lily is very remarkable, too, in a utilitarian point of view. Its seeds are eaten as nuts are in Europe, and boiled in sugar and water they are considered delicious by epicures. The gigantic root is a great resource for culinary preparations, and in whatever way it is dressed it is always excellent and wholesome. The Chinese pickle great quantities of it with salt and vinegar, to eat with rice; reduced to powder, it is extremely agreeable when boiled with milk or water, and in the summer it is eaten raw, like fruit, and is very refreshing. Finally, the leaves of it are constantly made use of, instead of paper, for wrapping up all kinds of things, and when dried are often mixed with tobacco, to render it a little milder.—S. P., *Rushmere*.

FISH AND FISH-PONDS.—CHINESE WHEAT.

THE province of Kiang-si possesses another trade less important and valuable, doubtless, than the China manufacture, but worthy of remark on account of its peculiarity, and the profits of which are not to be despised. This province is very marshy and abounds in ponds; there is scarcely a cottager who cannot boast at least of one close to his house, and these are turned to account for the rearing of fish, which yield annually a considerable revenue to their cultivators.

In spring, a number of men go round the provinces selling spawn. Their establishment consists of a wheelbarrow loaded with barrels containing a thick liquid, more like mud than anything else. It is impossible to distinguish the smallest animalcule in it with the naked eye. For a few sapecks you may buy a bowlful of this mud, enough to sow

a large pond; it is merely thrown into the water, and in a few days the young come forth. When they have attained some size they are fed with tender vegetables chopped up and thrown into the water, the quantity being augmented as they increase in size. The growth of these fish is incredibly rapid. In a month, at most, they are strong and active, and require abundant nourishment. Morning and evening the proprietors of fish-ponds ransack the fields for suitable plants, which they carry home in enormous quantities. The fish rise to the surface and throw themselves eagerly on their food, which they devour speedily, keeping up all the time a kind of murmuring noise, like a number of rabbits. Their voracity can only be compared to that of silkworms just before spinning their cocoons. After being fed thus for about a fortnight, they generally attain a weight of two or three pounds, after which they grow no more. They are then taken out and sold alive in the towns.

The fish-ponds of Kiang-si contain only this one kind of fish, which is of an exquisite flavour; if there are any other sorts, at least, we never saw them, and we are also unaware whether the spawn undergoes any preparation before it is sold.

The Chinese farmers class their various kinds of *Wheat* under two categories, one of which invariably begins to flower in the night, and the other, no less invariably, in the day; and they maintain that a knowledge of these characteristics is indispensable to their proper cultivation.—S. P., *Rushmere*.

THE WEATHER AND THE CROPS.

UNHAPPILY, the late incessant rain for a fortnight past, followed by a humid atmosphere, and a lack of sunshine at intervals, most essential at the verge of harvest, have caused no little alarm for the fate of the crops, and, we believe, not without a reason. The thickest and heaviest, and apparently the best *Wheats* are beaten down, and are rotting underneath; whilst the ears present a black appearance, called by some persons blight, or mildew; all, however, is occasioned by excessive wet, and never getting dry.

Potatoes, at present, are improving; but doubts are entertained for their safety, as some messengers have appeared in some localities of a diseased character, indicating more formidable decay, and warning us that we are "not yet safe out of the wood." No fatal spots on the leaves or stalks, however, have yet appeared; nor any usual stench emitting from them, have come under our notice up to this time; and we firmly believe, that till these occurrences do reappear, there will be no cause for alarm, and abundant crops may be expected; but should such symptoms shortly appear, our hopes will be blasted. It was fifteen days after the present date before it first appeared in 1845.—HARDY and SON, *Seedgrowers, &c., Maldon, Essex*.

July 31st, 1855.

HARDY ANNUALS THAT WILL SURVIVE THE WINTER.

HAVING had something to do with annuals, more or less, for the last three years—I mean autumn-sown annuals for early flowering the following spring—I am able, I think, to state what might be of interest to some of the readers of *THE COTTAGE GARDENER*, namely, the kinds which have stood here during the last severe winter unprotected. *Clarkia pulchella* and *C. pulchella alba*, *Iberis coronaria*, *Nemophila atomaria*, and *N. maculata*. These, after surviving the winter, have all flowered early, and, I might say, both plants and bloom have been equal, if not superior, to those of former years.—A. S., *The Grange, near Manchester*.

QUERIES AND ANSWERS.

GARDENING.

PRUNING FELICITE' PERPETUELLE ROSE.— GREEN CENTRE IN ROSES.

"I have two Larch poles, nine feet high, against which have been planted, three years, *Felicite' Perpetuelle Roses*,

one against each; the *Roses* already have considerably out-stripped the height of the poles, and thrown out vigorous branches, but do not flower; ought these branches to be stopped? My preconceived notion is, that this *Rose* ought not to be pruned. Am I right?

"My experience leads me to think that *Roses* on their own roots are equally liable to the green centre as those worked on the briar. The Hybrid *Chinas* are the class that suffer from that disease (if disease it be) with me; no other class have shown any disposition, although I have a considerable quantity, and of all the varieties.—AN OLD SUBSCRIBER."

[Three years is about the usual time for a young *Felicite' Perpetuelle Rose* to make full growth under very good management, and a young sapling of it never blooms sooner that we know of. We have one plant as much like yours, in age and growth, as possible; it produced one good cluster this summer, and a second cluster not so good; but now that it has filled the space, we expect a fair bloom from it next summer, and after that a most abundant bloom, and never to fail. What a healthy *Rose* it is, and what clusters! Your "preconceived notions" are quite correct; after the first two or three years none of these climbing *Roses* should ever be pruned, as the word pruning is understood, but certainly they all want a great deal of thinning. The very strongest and the weakest shoots to be cut entirely out before the middle of August in each year, and any strong growth after that to be merely stopped. No winter pruning if the summer management had been right.

Green centre in *Roses* is no disease, but just the contrary,—too much excitability; and Mr. Beaton thinks *Roses* on their own roots may be supposed to be more liable to the green centre than worked ones; but we venture to think this opinion is open to some modification. Would not a *Rose* worked on a stock of more vigorous habit than itself be more liable to the green centre than the same *Rose* worked on a stock of less vigorous habit than itself?]

TRITONIA AUREA, AN EXHIBITION PLANT.— ACHIMENES GIGANTEA CULTURE.—HEATHS AND OTHER TENDER PLANTS FLOWERING IN AUGUST.

"I shall be greatly obliged if Mr. Beaton will inform me whether the *Tritonia aurea* is considered sufficiently a greenhouse-plant to be shown in a collection of greenhouse and stove-plants. Last year, I had a collection disqualified by sending a pot containing six flowering stems; it was considered to be an herbaceous plant.

"Will you also inform me what to do with my *Achimenes gigantea*, as it does not grow freely, neither does it branch; but throws up a lot of stems from the old tuber, so that the stem, which is six inches high, does not grow any more since the others made their appearance?

"Do you consider *Liliums* can be exhibited in collections?

"Can you mention a few good *Stove and Greenhouse Plants to bloom about August*, *Ericas*, *Epacrises*, &c.?—AN AMATEUR."

[*Tritonia aurea* is strictly a bulbous plant, and should be exhibited as a specimen plant, or along with other bulbs of the *Ixia* or *Iris* tribe, or with *Gladioluses*.

Lilies should also be exhibited by themselves, and not with woody plants.

All the suckers on *Achimenes gigantea* ought to be made into cuttings, or be rubbed off, leaving one or three of the strongest to flower. The old bulb is evidently expending itself in these suckers, instead of making strong, flowering shoots.

Heaths to flower in August are sometimes earlier, and at other times do not flower before September; much depends on the management of them. The following are the surest to depend on, and some of them begin to bloom in July, and continue till after the middle of September:—

Erica acuminata. July, August, and Sept.

" *Aitoniana*. July, August, and Sept.

" *agregata*. July, August, and Sept.

" *anpullacea*. July and August.

- Erica ardens.* July, August, and Sept.
 „ *aristata major.* July and August.
 „ *assurgens.* August and September.
 „ *capitata.* July, August, and Sept.
 „ *conferta.* August and Sept.
 „ *Ewerana.* July, August, and Sept.
 „ *gemmafera.* July and August.
 „ *Hartnelli.* July, August, and Sept.
 „ *Juliana.* July and August.
 „ *Jasminiflora* } July, August, and Sept.
 „ „ *rubra* }
 „ *Lambertiana.* July, August, and Sept.
 „ *mutabilis.* July, August, and Sept.
 „ *ramentacea.* July, August, and Sept.
 „ *retorta.* July, August, and Sept.
 „ *Taxifolia.* July, August, and Sept.
 „ *verticillata.* July, August, and Sept.

These will come in just after the July shows, and continue, under good treatment, to flower to past the middle of September. Every one of them ought to be in bloom every day in August, and they are the very best for depending on. Give the list to your nurseryman, and ask him for 6, 10, 12, 15, or the whole lot of them; and to make any of the lots as varied as his stock will allow. We vouch for it, that this score of Heaths will give the best idea of the whole family, out of eighty or ninety sorts, which flower during these months. If you are smart at growing Heaths, you ought to have some of the many fine *Vestita* breed, with *Cerinthoides* and some of the *tricolors* and *Massoni*; but there is a few of the above, such as *Aristata* and *Juliana*, are ticklish things, but many people grow them most handsomely.

About other *Greenhouse Plants to flower in August*, we must not mention *Epacris* of any sort, and very few indeed of the real hard-wooded, fine-flowering greenhouse plants. The following sections we draw on for August flowers:—*Gloxinias*, *Achimenes*, *Vincas*, *Clerodendrons*, *Gardenias*, *Lantanas*, *Begonias*, *Hibiscus*, *Justicea carnea*, *Plumbago capensis*, *Diplacus grandiflorus* or *Californicus*, *Calosanthus* or *Crassulas*, *Hermiandra pungens*, *Pentas carnea* and *rosea*, *Torrenia asiatica*, *Crowea saligna*, *Sollya linearis*, and *heteroptylla*, *Statice latifolia*, *Maudevillea*; all the dwarf varieties of *Maranta ornata*, as *lineata rosea*, *alba lineata*, and *vittata sanguinea*; also *Æchmea fulgens* and *discolor*, *Vriesia speciosa*, *alias* *Telandria splendens*, *Aphelandra squarrosa*, *Porteana* and *Leopoldi*, the *Scarlet* and *White* berried *Ardesia crenulata*, *Stylidium scandens*, *Pelargoniums*, *Fuchsias*, *Balsams*, *Coxcombs*, *Impatiens latifolia* and *alba*, and *Hookeri*. Out of all this host there are only three greenhouse plants which we would show in a collection of “greenhouse plants”—*Crowea saligna*, and the two *Sollyas*.]

GROWING MUSHROOMS IN A VINERY.— PELARGONIUMS NOT BLOOMING.

“I want to grow *Mushrooms* in the centre pit of the Vinery, which is filled with tan. I should be very glad of a little information as to the getting the spawn, and the general management of them, so as to get *Mushrooms* in winter.

“My *Pelargoniums* have not bloomed well this year. I fear I have not used the right soil for them. I potted them in large pots the early part of December last. The soil was chiefly loam, with a little leaf-mould and a little scrapings from the road. I potted them in much larger pots than they were in before. Do you think they will bloom better next year in the same pots and soil? Or what is the best soil and treatment for them to bloom well? The enclosed leaves are from a seedling plant, which I should be glad of the name of. There are no flowers yet. — A CONSTANT READER.”

[We do not know how large your pit-bed may be, nor the supply required; as sometimes we want to keep a number of plants in such places during the winter; whilst a *Mushroom*-bed might be made all along the front part of the pit, say a foot-and-a-half, or two feet, or even more, wide, where they would be readily looked at at any time, or to gather from when required. The best of directions have already been given in *THE COTTAGE GARDENERS' DICTIONARY* for the preparation of the materials for making of *Mushroom* beds; but these should now be collected and well worked up

to sweeten, so as to be ready for putting together towards the end of September, of course using principally horse-droppings to form the bed with. This should be made from a foot to fifteen inches thick, all along near the front or back wall of the pit, whichever is most convenient to get at. It should be built firm, and well spawned, and cased over with earth, as described in former volumes of this work. After the bed has been made for ten days, or a fortnight, or so, a light covering of mouldy hay might be placed over the bed, which would add to its moist warmth, in which the *Mushroom* delights. More covering should be added, according to the external temperature of the atmosphere, and precautions against its ever being wet.

We cannot say why your *Pelargoniums* should not have flowered well. We see nothing in the soil or times of potting them if the drainage was good. *Geraniums* generally do well in almost any good, rich, porous soil, and placed upon a stage, rather near the glass, in a good, open, airy greenhouse, where they can enjoy the benefit of the sun's rays at all times. This is generally the season for cutting them down and putting in cuttings, &c.; and when they have again made fresh shoots to repot them carefully, shaking them out of their old soil, and potting them into smaller pots again for the winter months; and then, towards the end of January, or early in February, to shift them again into their flowering-pots, taking advantage of an open, fine day for doing such work, and keeping the house a little warm after the repotting for a week or so. Perhaps your pots were too large, and thus over-vigorous growth was caused.

Your leaf appears to have been taken from an old hardy herbaceous plant called *Sida napæa*.]

COVENT GARDEN.—AUGUST 6.

THE supply of Fruit is on the increase. *Apples* have now made their appearance, and there is a good supply of *Hawthorndens*, *Devonshire Quarrendens*, and *Carlisle Codlins*; they make 3s. 6d. per half-sieve. *Cherries* continue abundant, although the late severe rains have considerably damaged them; the sorts which are most plentiful are *Bigarreaux* and *Black Coronne*; and also a few *Kentish*. *Gooseberries* and *Currants* are abundant. There have been large arrivals of *Apricots* from the Continent, some of which are now selling at 1s. per dozen; but the finest productions in that way are the *Greengages*, from *Marseilles*, which are packed in boxes, and are beautiful both in size, colour, and ripeness. They are brought all across France by rail, and appear as fresh as if they had been just gathered from the tree; they make 2s. per dozen. *Peaches*, *Nectarines*, *Pine-Apples*, and *Grapes*, continue plentiful at last weeks' prices. *Strawberries* are now over, except a few straggling lots of *British Queens*, and some indifferent-looking *Eltons*.

COVENT GARDEN.

FRUIT.			
Almonds, per lb.	2s. „	—	—
Nuts, Filberts, lb.	— „	—	—
„ Cobs, lb.	— „	—	—
„ Barcelona,			
per bushel....	20s. „	22s.	
„ Brazil, per			
bushel	12s. „	14s.	
Chestnuts	— „	—	—
VEGETABLES.			
Cabbages, per doz.	9d. to 1s.		
„ Red, per doz.	2s. „	4s.	
Cauliflowers, doz.	2s. „	3s.	
Brocoli	— „	—	—
Savoy	— „	—	—
Greens	— „	—	—
Spinach, per sieve	1s. „	2s.	
Peas, per half sieve			
	1s. 6d. „	2s. 6d.	
Beans.....	— „	—	—
French Beans, per			
quart	3d. „	4d.	
Scarlet Runners	— „	—	—

COVENT GARDEN — Continued.

Carrots, bunch .. 4d. „ 6d.	Small Salad, per punnet .. 2d. „ 3d.
Parsnips .. „ „	Artichokes, each 3d.
Beet, per doz. 1s. „ 1s. 6d.	Asparagus, per bundle.... 1s. 6d. „ 4s.
Potatoes, per cwt. 10s. „ 20s.	Sea-kale, per pun. — „ —
Turnips, bunch .. 2d. „ 6d.	Rhubarb, per bdle. 2d. „ 6d.
Onions, young, bunch..... 1d. „ 2d.	Cucumbers, each 3d. „ 8d.
Leeks, per bunch 2d. „ 3d.	Vegetable Marrow 2d. „ 3d.
Garlic, per lb. .. 6d. „ 8d.	Tomatoes .. „ —
Shallots, per lb. 4d. „ 6d.	Mushrooms, per pottle .. 8d. „ 1s.
Horseradish, per bundle.. 1s. 6d. to 2s. 6d.	HERBS.
Lettuce, Cos, per score .. 6d. „ 1s.	Basil, per bunch 6d. to 9d.
„ Cabbage 6d. „ 8d.	Marjoram, per bunch .. 6d. „ 9d.
Endive, per score 1s. „ 1s. 6d.	Fennel, per bunch 2d. „ 3d.
Celery, per bun. 8d. „ 1s.	Savory, per bunch 2d. to 3d.
Radishes, Turnip per doz. bunches 1s. „ 2s.	Thyme, per bunch 2d. „ 3d.
Water Cresses, per doz. bunches.. 6d. „ 9d.	Parsley, per bunch 2d. „ 3d.
	Mint, per bunch 4d. „ 6d.

POTATOES.

Regent's, York, per ton 160s. to 195s.	Regent's, Scotch, per ton 125s. to 150s.
„ Kent and Essex 140s. „ 180s.	Scotch Reds.. 120s. „ 140s.
„ Lincoln 120s. „ 180s.	„ Blues 95s. „ 130s.

GRAIN AND SEED.

WHEAT.	PEAS.
Kent and Essex, red, per qr. .. 70s. to 77s.	Boiling, per qr. 42s. to 47s.
Ditto, white.... 76s. „ 84s.	Common .. 36s. „ 38s.
Norfolk and Suffolk .. 71s. „ 76s.	Grey .. 37s. „ 40s.
Dantzic .. 84s. „ 92s.	Maple .. 40s. „ 42s.
Rostock .. 80s. „ 90s.	SEEDS.
Odessa..... 70s. „ 78s.	Turnip, White, per bush. — to —
American..... 82s. „ 86s.	Swede .. „ —
BARLEY.	Rape .. 84s. „ 86s.
Malting .. 36s. to 38s.	Linseed, sowing 74s. „ 76s.
Grinding and Distilling.... 31s. „ 33s.	„ crushing 70s. „ 73s.
Chevalier .. 34s. „ 36s.	Clover, English, red..... 60s. „ 68s.
OATS.	„ Foreign do. 52s. „ 57s.
Scotch, feed .. 32s. to 33s.	„ White 68s. „ 73s.
English .. 27s. „ 31s.	Trefoil .. 28s. „ 32s.
Irish .. 26s. „ 29s.	Rye .. 40s. „ 43s.
Dutch Broo .. 30s. „ 31s.	Tares .. „ —
Danish .. 28s. „ 30s.	Canary .. 50s. „ 54s.
Russian .. 27s. „ 31s.	Hemp .. 50s. „ 53s.
BEANS.	Linseed Cake, per ton £12 to £12 10s.
Harrow .. 41s. to 43s.	Rape Cape £6 10s. „ £6 15s.
Pigeon .. 42s. „ 48s.	Indian Corn .. 47s. „ 50s.
Tick..... 40s. „ 42s.	

HOPS.

Mid & E. Kent £14 to £18	Weald of Kent £10 10s. to £11 10s.
Sussex.... £10 to £10 10s.	

HAY AND STRAW.

Clover, 1st cut per load .. 110s. to 147s.	Meadow Hay, new 95s. to 105s.
Ditto, 2nd cut 90s. „ 130s.	Rowan .. „ —
Meadow Hay .. 90s. „ 135s.	Straw, flail 30s. „ 36s.
	Ditto, machine 28s. „ 30s.

MEAT.

Beef, inferior, per 8 lbs. .. 3s. 4d. to 3s. 6d.	Mutton, mid. 3s. 10d. to 4s. 4d.
Do. mid... 3s. 8d. to 3s. 10d.	Do. prime 4s. 6d. to 4s. 10d.
Do. prime.... 4s. to 4s. 2d.	Veal 3s. 10d. to 4s. 10d.
Mutton, inferior... 3s. 4d. to 3s. 8d.	Lamb 5s. 4d. to 5s. 10d.
	Pork, large 3s. 8d. to 4s. 0d.
	Ditto, small 4s. 0d. to 4s. 6d.

POULTRY.

Goslings 5s. to 6s. 6d.	Ducklings .. 2s. 0d. to 3s. 0d.
Fowls .. 3s. „ 4s.	Pigeons .. 0s. 6d. „ 0s. 8d.
Capons.. 3s. 6d. „ 4s. 6d.	Rabbits .. 1s. 0d. „ 1s. 6d.
Chicken .. 2s. 0d. „ 3s. 0d.	

PROVISIONS.

BUTTER.—Cwt.	CHEESE.—Cwt.
Dorset, fine .. 98s. to 102s.	Cheshire, fine .. 70s. to 84s.
Do. middling .. 80s. „ 86s.	Gloucestershire, double .. 68s. „ 74s.
Fresh, per doz. lbs. 8s. „ 12s.	Ditto, single.... 56s. „ 70s.
Friesland 100s. „ 104s.	Somerset .. 70s. „ 84s.
Kiel .. 96s. „ 100s.	Wilts, loaf 68s. „ 78s.
Carlow .. 94s. „ 98s.	Ditto, double .. 72s. „ 78s.
Waterford 90s. „ 94s.	Ditto, thin 54s. „ 64s.
Cork .. 84s. „ 98s.	Ditto, pines 72s. „ —
Limerick 86s. „ 98s.	Berkeley, thin .. 62s. „ 66s.
Sligo .. „ —	
BACON.—Cwt.	HAMS.—Cwt.
Wiltshire, dried 78s. to 80s.	York, new 80s. to 90s.
Waterford 72s. „ 74s.	Westmoreland.. 76s. „ 86s.
	Irish..... 74s. „ 84s.

WOOL.

Down Tegs 1s. ½d. to 1s. 1½d.	Leicester, fleeces .. 11½d „ 1s. 0d.
Ditto Tegs and Ewes 11d. „ 1s. ½d.	Long, heavy do. 11d. „ 1s.
Half-bred Hogsgets 11½d. „ 1s. 1d.	Combing skins 10½d. „ 1s. 1d.
Do. Wethers 11d. „ 1s.	Flannel wool 1s. 1d. „ 1s. 2½d.
Kent Fleeces 1s. ½d. „ 1s. 1d.	Blanket wool 8½d. „ 1s. 0½d.

TO CORRESPONDENTS.

BACK NUMBERS.—Sixpence each will be given for clean copies of Nos. 1, 3, 5, 6, and 66, of *THE COTTAGE GARDENER*, delivered free at the Office, 20, Paternoster Row.—Full price, also, will be given for Volumes I and III.

PEAR-TREE PRUNING (*A Young Subscriber*).—It is quite impossible for us to give a list of numbers containing directions on this subject; vols. X, VIII, VI, and III, contain much information on the subject. Buy vol. III to begin with. Its price is about 9s. 6d.

HERB BORDER (*F. H.*).—Herbs, such as Thyme, Sage, &c., are of the easiest culture. They require a dry soil, with a mixture of limy rubbish. Refer to our Monthly Calendar of the Kitchen Garden for the time of propagation. Full cultural directions are in *The Cottage Gardener's Dictionary*.

NAMES OF POTATOES (*A Constant Reader*).—The white specimens sent are of *Walnut-leaved Kidney*. The reds are of two different varieties—one is the *Fortyfold*, and the other, we think, is the *Red Bread Fruit*. Thanks for the recipe.

VEGETABLE MARROWS ROTTING (*G. H. W.*).—Both the Cucumber and Gourd varieties have for the last two or three years been subject to a premature decay of the fruit. We can only suggest that seed at least two years old, and a greater depth of light and less rich soil, should be employed as a preventive. We will answer your other query next week.

BALSAMS (*J. S. K.*).—Mottled-coloured petals are not objected to in show flowers,—doubleness, and large size, and abundance of pips, and brightness of colour, and stoutness of petal are points of excellence. Try repeated applications of Scotch snuff and Tobacco-water to the *Ant's nest* on your lawn.

YOUNG CHICKEN (*F. R.*).—How can we tell what has caused the illness of your chicken, when you do not tell us one word about their management? Moderate warmth, dry housing, eggs boiled hard and chopped fine, barley-meal slightly moistened, and plenty of green food, and clean water are their requirements until a month old.

GLOXINIA SEEDLINGS (*H. W.*).—The flowers are not novel, yet good. No. 1, with the pink strain, and No. 2, with the purple, are the best.

EMPRESS OF THE FRENCH CUCUMBER.—A. S. wishes to know where seeds of this can be obtained.

SOOT (*A Subscriber from the Beginning*).—You shall have copious information next week.

NAME OF PEA (*J. R. Easingwold*).—Your Pea appears to be *Noble's Early Green Marrow*, an excellent Pea, and well worthy of cultivation.

NAMES OF PLANTS (*T. M. W.*).—Certainly the common Rest-Harrow, *Ononis arvensis* of Linnaeus. (*W. D. A.*)—The plant you have raised from the aromatic seeds put between the Darca muslins, to keep away the moth, is *Nigella arvensis*, the greenish-white Fennel flower.

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WEEKLY CALENDAR.

D M	D W	AUGUST 14—20, 1855.	WEATHER NEAR LONDON IN 1853.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in Inches.						
14	TU	Coccinella mutabilis.	29.836—29.726	72—52	S.W.	—	45 a 4	24 a 7	8 25	2	4 31	226
15	W	Forficula borealis.	29.845—29.836	71—43	W.	—	46	22	8 36	3	4 20	227
16	TH	Locusta flavipes.	29.954—29.836	67—42	W.	11	48	20	8 46	4	4 9	228
17	F	DS. KENT BORN, 1786.	30.038—29.987	64—40	W.	10	49	18	8 57	5	3 57	229
18	S	Brimstone.	30.128—30.095	73—46	W.	—	51	16	9 10	6	3 44	230
19	SUN	11 SUNDAY AFTER TRINITY.	30.139—30.042	76—58	S.W.	12	53	14	9 25	7	3 31	231
20	M	Pale clouded Yellow.	29.996—29.924	75—49	W.	01	54	12	9 43	8	3 17	232

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 72.8°, and 51.5°, respectively. The greatest heat, 92°, occurred on the 18th, in 1842; and the lowest cold, 33°, on the 20th, in 1839. During the period 114 days were fine, and on 82 rain fell.

ASPLE'NIUM GERMA'NICUM.



THIS, among many other names, has also been called *Asplenium alternifolium*, because the leaflets are more distinctly alternate than in most other Ferns, but as all the species are, for the most part, alternate-leaved, this is an objectionable name; and so, indeed, is *germanicum*, for this species is native of other countries besides Germany. However, it is better to put up with an inappropriate name, rather than to encumber the student with synonyms.

Our drawing is of the life-size; for this Fern varies but little in height between three and five inches. Its main root is black, furnished with many rootlets of the same colour, and crowned with a tuft from amid which arise the fronds. The stem of these is so deep a purple at the bottom as to appear black; the lower half is unleafleted, and the upper half is green, and furnished with but a few widely separated leaflets, very distinctly alternating. The leaflets are pale green,

narrow-wedge-shaped, tapering into slender stalks, and the top of each leaflet is deeply notched, and one notch in the lower leaflets is so deep as to form a lobe. There is no mid or main vein to the leaflets, but small parallel veins, some of which have the fructification along their inner edge. The fructification (sori) are covered by a narrow membrane, the opening edge of which is whole, or at most indented, but never jagged. The spores, or seed, are ripe in August, at which time the fructification on each leaflet has united together, or become confluent.

Linnæus considered this a mere variety of the *Asplenium ruta-muraria*, or Wall Rue; and it is decidedly much resembling that, as it does also *Asplenium septentrionale*, or Forked Spleenwort, yet it is very distinct from each.

It is found, but not abundantly, in Germany, Switzerland, Italy, France, Hungary, and Sweden; but was not known to be a native of Great Britain until discovered at the close of the last century, somewhere about 1792, by Mr. Dickson. He found it on some rocks in the south of Scotland, and published his discovery in the second volume of the Linnæan Society's Transactions. In that country it has been found on rocks in the Tweed, near Kelso, in Roxburghshire; on the Stenton Rocks, near Dunkeld, in Perthshire; and near Dunfermline, in Fifeshire. In England it has been found at Borrowdale and Scaw-fell, in Cumberland; on Hyloe Crags, in Northumberland; and in Wales near Llanwrst, and in the pass of Llanberis. These are the only localities at present known as its dwellings, and even there it is not abundant, so that it is one of the rarest of our Ferns. It seems entirely to have been passed unnoticed by Gerarde and others of our earliest botanists.

In its wild state its fronds die during the winter; but cultivated in a cold greenhouse, from which frost is excluded, it remains evergreen.

It requires a very light, poor soil, and we have found it thrive most and permanently in a mixture of equal proportions of sharp river sand, sandy peat, and limy rubbish. One-third of the pot in which it is planted should be filled with drainage of broken potsherds. Nothing destroys this Fern so soon as an excess of water either about its roots or its foliage.

The soil in the pot should rise to a conical point, and in that point the Fern should be planted with the tufted head of its root well above the surface, so that water cannot settle in it. If grown under a bell-glass, this

should be taken off daily, and be raised at the sides almost continually to avoid a close, damp atmosphere, for such an atmosphere is injurious and even fatal to the plant if long continued. We prefer growing it in a greenhouse where a bell-glass is not needed. It must be shaded from the sun; and in watering, no water must be poured over the crown of the root.

Unless all these precautions are taken this Fern will not live under cultivation. Its dislike of a close atmosphere precludes it from the Wardian case, for which its diminutive size renders it peculiarly suitable.

THE Annual Meeting of the British Pomological Society was held at the Rooms, 20, Bedford-street, Covent Garden, on the 6th inst., when the chair was occupied by Mr. Rivers, of Sawbridgeworth.

The objects of this Meeting were to elect Office Bearers for the ensuing year, to receive the Treasurer's Report, and for general business; and it is gratifying for us to have to state, that the success which has attended the Society from its formation is such as to satisfy the expectation of its most ardent well-wishers. Mr. Spencer reported that the Society now consists of ninety-four members; that the income for the past year, arising from entrance fees, subscriptions, and donations, amounts to £84, and the expenditure to £62 16s. 2d., leaving a balance in hand of £21 3s. 10d., which, with outstanding subscriptions, amounting to £17, leaves a total balance in favour of the Society of £38 3s. 10d. This statement being submitted to the Meeting, it was unanimously approved of. Mr. Spencer then begged to be allowed to resign the office of Treasurer, on the ground that his residing at a distance so far from London prevented him from taking such an active part in the management as he could wish, and he believed that the interests of the Society would be better served by the appointment of a resident Treasurer. This subject having been taken into consideration by the Meeting, it was agreed to accept Mr. Spencer's resignation, and Mr. Thomas Taylor, of Covent Garden, was unanimously elected in his stead. Mr. Hogg stated that, although he would still continue to hold the office of Secretary, and to give the Society all the aid in his power, as hitherto, he was of opinion that it would be of advantage to the Society, seeing that the duties of the office were now greater than he could conveniently discharge, that an Assistant Secretary, with a fixed salary, should be appointed, and to whom the practical working of the Society should be entrusted. The Meeting having approved of this suggestion, Mr. William Davidson, late of Shrubland Park, was unanimously elected Assistant Secretary.

The list of Office Bearers having been read, the following were elected for the ensuing year:—

PRESIDENT.

SIR JOSEPH PAXTON, Knight, M.P.

VICE PRESIDENTS.

R. HANBURY, Esq., The Poles, Herts.
H. BELLENDEN KER, Esq., Cheshunt.
M. W. STEPHENS, Esq., Reading.

THOMAS INGRAM, Esq., Frogmore.

COUNCIL.

G. W. JOHNSON, Esq., Winchester.
H. G. BOHN, Esq., Twickenham.
MR. THOMAS RIVERS, Sawbridgeworth.
MR. ROBERT HOGG, London.
MR. JOHN LEE, Hammersmith.
MR. GEORGE MCEWEN, Arundel Castle.
MR. J. B. WHITING, The Deepdene.
MR. THOMAS MOORE, Chelsea.
MR. HUGH LOW, Clapton.
MR. CHARLES TURNER, Slough.
MR. J. POWELL, Frogmore.
MR. J. EDWARDS, Holloway.
MR. F. G. MAILLON, Claremont.

TREASURER.

MR. THOMAS TAYLOR, Covent Garden.

HONORARY SECRETARIES.

MR. JOHN SPENCER.
MR. ROBERT HOGG.

ASSISTANT-SECRETARY.

MR. WM. DAVIDSON.

Mr. McEwen, of Arundel Castle, sent a specimen of a Melon, which he called the *Golden Drop Melon*, but which, in the opinion of the Meeting, was the *Bromham Hall*. Unfortunately, this excellent fruit, which was a fair specimen, had been cut too early, and had been kept too long after having been cut. To the same gentleman the Meeting was indebted for fruit of the *Stanwick Nectarine*, which was well-grown, and admirably ripened. There can be no doubt that this is a valuable acquisition to our British fruit-gardens. The flesh was very melting, juicy, and richly-flavoured, and contrasted very much with excellent specimens of *Elruge*, sent by the same gentleman, and which were more briskly-flavoured and vinous than the *Stanwick*. In the collection were, also specimens of *Chapman's Prince of Wales Plum*. This variety is an immense bearer; the fruit is in appearance similar to the Orleans, but it is a variety better adapted for cooking or preserving than for the dessert.

Mr. Busby, of Stockwood Park, exhibited two bunches of his new seedling Grape, which has been called the *Stockwood Golden Hambro'*. One of the bunches had been highly forced, and the berries were of that fine pale amber colour which we find in highly-ripened Muscats. The other had been grown in a house with little fire-heat, and was not so ripe as the other. The bunches are large, and shouldered like the old Black Hambro'; the berries are large, and inclined to be oval; the skin thin; flesh tender and juicy, and with a rich, sugary, and very full, vinous flavour. We cannot speak in too high terms of this admirable fruit, which is, without doubt, the best of all the white Grapes, except only the Muscats. It forms a noble bunch, and has a handsome berry, and one which cannot fail to find a place wherever Grapes are grown. We have since ascertained that it is one which bears carriage well, as it is with difficulty that the berries can be shaken from the bunch.

Mr. Rivers, of Sawbridgeworth, produced fruit of *Lemercier Cherry*, which were large and very beautiful. This is a distinct variety of *Reine Hortense*, which we described

in our last number, and from which it is distinguished by the upright habit of the tree, and the fruit being somewhat later. The fruit was very large, tender, and melting, with a very agreeable and refreshing flavour. Mr. Rivers also exhibited ripe specimens of *Doyenné d'Été Pear*, which is the earliest variety we have, coming in even before the *Citron des Carmes* and the *Crawford*. It is a pretty little fruit, with tender and juicy flesh, and with a sweet and agreeable flavour. Mr. Rivers stated that he regretted not having brought with him specimens of a new seedling Nectarine, which was raised from the *Stanwick*, and which he considered an improvement on that variety. We have, however, had an opportunity of seeing the fruit since the meeting, in company with several other members of the Society, and we feel pleasure in saying that we regard it as one of the greatest additions we have had to this class of fruits, not excepting the *Stanwick* itself, to which it is infinitely superior, both in size and flavour. The fruit is very large; one of the specimens being eight inches in circumference, and of the shape of a truncated cone. It is mottled with pale and very dark red where exposed to the sun, and is of a greenish-yellow where shaded. The skin is thin; the flesh separates freely from the stone, is exceedingly tender and melting, being somewhat of a buttery texture, like the most delicate of the *Beurré Pears*; the juice very abundant, and so full of sugar as to be quite a syrup; the flavour is full and rich, and exceeds in richness that of any other Nectarine. The kernel, like that of its parent, is quite sweet, like a Filbert. The fruit was from a plant grown in a pot; and it was suggested, that if grown in the open ground, the fruit might even be larger. There was one peculiarity which was remarked in all the specimens, that the stone, in every instance, was cracked.

It was agreed that the next ordinary Meeting should be held on the third Monday of September, and the extraordinary Meeting on the first Monday of November.

It is exceedingly gratifying to us to see the steady and onward progress of this useful Society. When we consider that the preliminary expenses attending the establishment of the Society, and the current expenses of the whole year, have been defrayed from entrance fees of *ten shillings*, and *ten shillings* as an annual subscription; and when we see, also, what the Society has done in that short period, we are convinced that it is not an expensive establishment; nor an array of high-sounding names that are necessary to make a society really useful. It is when earnest, practical, and disinterested men associate themselves together for the attainment of mutual or public good, that good is to be attained; and believing, as we do, that the BRITISH POMOLOGICAL SOCIETY is destined to make for itself a name and a place among the useful societies of the day, we strongly recommend it to the notice of those of our readers who are not only desirous of benefiting themselves, but of communicating the same benefit to others.

RAISING HOLLYHOCK SEEDLINGS. — EVER-GREEN BERBERIS AS AN EDGING.

THE good old ways are fast wearing out now-a-days. The moment a Hollyhock-seed turns colour, or the seed-pods look a little browned, or a little of some other tint which shows that the seed within is fast approaching to maturity, it is gathered, cleaned, and sown the same day; the seedlings are up, wintered, and are in their final nursery rows by the time old gardeners used to sow their Hollyhock-seed; and by this time next year, or a little later, the proof of the pudding is before your eyes, instead of waiting a year longer. But every one cannot do this, for want of the proper means for protecting the seedlings during the winter; most of the fast-growers consider it necessary to give the same degree of protection to Hollyhock seedlings which come up after the middle of September, as they would to pots of Mignonette, so that any one who has been in the habit of keeping Mignonette in pots over the winter need not fear about trying the Hollyhock, to save a whole year in proving the seedlings.

I have gone through this process myself only once, and cannot, therefore, from experience, recommend a bolder course; but it strikes me that seedling Hollyhocks are as hardy as most Lettuces, and might be wintered quite safely under a south wall, something after this fashion; sow them in pots before they are dead ripe; put a piece of glass over the pot, and set it in the warmest place about the house, and keep it there till the seedlings have made some progress; give proper attention to watering, so that the mould in the pot is *constantly* damp—I mean, that the surface should not look quite dry all this time, for the whole secret lies in getting the seedlings up as fast as possible, and that cannot be done by a system of “wet and dry,” as in watering pot plants. As soon as you see the seedlings coming through the surface, slip the glass a little to one side to give them air; but keep the glass over them as long as ever you can, for it will bring them on much faster than you may think, and they will be all the stronger as well, owing to the air being given them so early. When the seedlings reach up to the pane of glass, you are not to put it by as of no more use; you must show your inventive powers if you mean to learn the knack of doing things better than those who let everything take its chance. Put three or four small sticks in the pot round the sides, so as to raise the glass one inch from the leaves; the glass will rest on the sticks just as well as on the rim of the pot, and the air keeps constantly in motion from this time, which is another great advantage to them; but from the moment you can see them coming, you must change the mode of watering the pots, for, like big plants, what suits them from this time is to have the surface of the mould dry, twice a week, at least, or even once a week in November; by before the end of November, I should think the balls might be turned out, and be plunged under a south wall, and quite close to it; then to have some very dry ashes to put round them to six inches distance, and to *change the ashes* at least once a month all through the winter; to change it on a fine day, and not to put the fresh dry ashes on till the last thing in the evening. Also, to have a board, or slates, or tiles, to place over them, and against the wall during heavy rains and hard frosts.

Many gardeners, and good gardeners, too, are obliged to resort to such contrivances as this to keep their Cauliflower plants, Lettuces, and ever so many things in the same season; but, recollect, I did not try this plan myself; and I am not sure if it will answer; but I see no reason why it should not, nor why you should not try the experiment, and be the first to prove that the thing is possible. Once the spring comes, the seedlings will

start afresh, but April will be time enough to remove the balls and shake off the soil, and to plant the little seedlings anywhere round the garden where there is room for them. After two or three good waterings they are now safe, if the slugs and snails do not get to them; but no one allows these to get about a garden, in these days, more than weeds. When I took in my new garden, in 1852, the ground was swarming with slugs, but I killed them all that season, by merely laying down Cabbage-leaves, under which they flocked, for hiding out of my sight, and I had them destroyed every morning; since then, I do not think I have lost a leaf by them. I used to say I killed thousands of them, but I am sure, if I killed one, I killed one thousand, for I never saw such lots of them anywhere else. Now I wish all the weeds were as easily kept down as slugs and snails—not on my own account, for I never allow any weeds in my own garden—but from knowing how troublesome they are to some people.

RAISING EVERGREEN BERBERIS SEEDLINGS.

The next plant, or one of the few which every one ought to grow, is the common Evergreen Berbery (*Berberis aquifolium*), which is just at this time full of ripe seeds, in clusters like Grapes, of which birds are as fond as children are of fruit; they, too, I mean the seeds, must be gathered as soon as the berries begin to turn colour, and to be sown as thick as Sweet Peas in rows, here and there, wherever there is room, or in a bed by themselves, like the old way of having Onion-beds; they ought to have one inch deep of covering, and no more; they will lie all the winter as they are, and never come up till late in the spring; but they will all grow at last, and if they come up as thick as grass they will take no hurt the first year, and after that they can be handled and planted thinner for a couple more years, when they will be fit for any place; they will grow anywhere, or in any kind of soil in this country, and as they can be increased so fast, and with no kind of trouble, they are everybody's plant, and no one ought to be without some of them. There is one use, however, above all other uses, for which I should like to hear not only of thousands of them, but millions and millions to be planted, and that is in place of turf edgings, round beds of shrubs, along shrubbery borders, and carriage drives in all villa gardens of less than ten acres in extent, and in all other places where less than four men are kept on purpose for the garden. No one can tell the trouble and expense of keeping turf edgings in proper order better than an old gardener; and I have no hesitation in saying, that edgings of turf are the most expensive things about a garden. To understand this, you ought to be up early in the morning, and see how the thing is actually done; just watch a man laying on his scythe on a verge of grass a foot wide, and as long as the end of it is off, if ever there is an end to it at all; inside, on the border, the place is full of some plants or another, so that the man cannot take a long stretch to cut every time he draws the scythe; let him be ever so handy at other things, you must take him to be clumsy now; but he cannot help it, no one ever could at this awkward job; it is a kind of dod, dod, dodging at the best, till all is done, and then it is only half done, if so much; both sides of the verge must now be gone over with the edging shears, which are always blunt, or always at the grind-stone; after that the top and both sides are to be swept to gather off the grass; the broom scratches every little plant on the border side, and the stones on the gravel side, and do what you will, you cannot help doing some harm on both sides; this is to be repeated every week through the season; and if you were to calculate the man's time, you would find that I am not far wrong when I say about the expense of turf edgings; but compare this with that

of keeping a strong band of the Evergreen Berbery between the border and the gravel, and you will find it as mere nothing to the expense for turf.

As to the comparative looks of the two edgings, I hold that of the Berbery to be the best of the two by far. You may not like it so well at first, but depend on it you will soon come round to my way of thinking, and wonder the edging has not come into fashion long ago.

If I had a bed of seedling *Berberis* to go to next October, I would unturf every verge round the garden, and dig up the bottom; then plant a row next the gravel, putting in the plants so thick that the edges of the leaves would touch all along, or all round; then fill and tread the earth over the roots, and then stretch the garden line six inches inside the first row, and plant a second line the same way; then a third row to finish a good broad edging—for I dislike a narrow verge above everything. Now, for the keeping in order of such a luxury of an edging, all that would be needed for the whole garden in one year would be only the work of a tidy man for a few hours one afternoon towards the end of May in each year, when the plants were all out of bloom; then I would order every shoot which grew out over the gravel, or over the border, to be cut into one straight edge on each side, and all the shoots along the band to be cut down to four or five inches, after that the bottoms would grow together almost as close as grass itself; and my edgings would be finished for one year. I need not say anything about the extra bloom that one would have this way, out of nothing, as it were, nor of the feed for bees at the very time when it is most wanted; everybody in the country can see at once the beauty of all this; therefore, all that remains for me is to say that this is as easy to do as it is for me to write about it. I have done it myself, and I have seen it done under my directions by people who never dreamt of such a way, and everybody likes it.

D. BEATON.

CRYSTAL PALACE.—The report of the Crystal Palace Company issued preparatory to the General Meeting, states that the amount expended up to the 30th of June was 1,231,000*l.*, and the liabilities to be discharged before closing the capital account amount to 45,000*l.*, which will make a total of 1,275,000*l.* This is exclusive of 65,000*l.* remaining due on the original purchase of land, and against which there are available assets of 38,000*l.* Estimating everything, the general result coincides with the statement a year ago, that the undertaking would be completed for 1,300,000*l.* The estimate of 1,000*l.* a-week for expenditure has also proved correct, or, rather, it amounts to about 900*l.* The net profits of the first year (exclusive of 25,786 guinea season tickets, which are applicable to the next year) have been 66,000*l.*, out of which a dividend of 5 per cent. was declared in February, leaving 12,299*l.* now to be carried over. The total number of visitors to the Palace, exclusive of season ticket-holders, has been 1,322,008, of which 956,232 were from the opening to the 30th of December, and 365,776 from the 30th of December to the 30th of June last. The rental for space in the former period was 18,738*l.*, and in the latter only 4,311*l.* Much of the permanent success of the undertaking is felt to depend on the increase of the railway facilities, and it is expected that the West-end line, which is now proceeding with vigour, will be finished in the course of next year. The shareholders having already had a dividend for the year, none is declared on the present occasion; but, if one should be warranted on making up the books in December, the directors will call a meeting. Sir Joseph Paxton, having brought all the works and arrangements of the building and grounds to a point which requires only ordinary labour for their

completion, desires, for the sake of his other duties, to be relieved from the further exercise of an active superintendence, but will continue to give the company the benefit of his counsel and experience. Mr. Laing, the chairman, retires, and there are likewise vacancies in the direction, occasioned by the resignation of Messrs. Fuller, Calvert, and Lushington. "As regards the future, it is evident that the prospects of commercial success depend entirely on the number of Visitors who in the average of a series of years may be attracted to the Palace. Of this, the experience of the present year will afford the best test, as the attraction of novelty is now over, and considering the circumstances of the times,—the war, the scarceness of provisions, and above all, the insufficiency of the present means of conveyance to the Palace,—this experience appears to the Directors to be very satisfactory."

HEATING PITS.—MELON-GROWING, &c.

"I HAVE a pit, sixteen feet by eight feet, divided by a brick wall into equal compartments. I had a flue at the bottom, which has not been used, as I now have a greenhouse, and it is out of order. The pit is two feet in the ground, and one-and-a-half feet above it in front, and higher behind. There is no way of giving heat from the outside. I want to grow Melons in it in summer, commencing in March; and to keep plants, Geraniums, &c., in it in winter. I think of building a low house, twenty feet by twelve. The side-walls two feet in the ground, and two feet above it. Descending by three steps, the walk would be along the centre seven feet high, with a slab on each side. I propose heating both buildings by hot-water pipes, from the same boiler, and shall thank you for advice how to proceed. Should there be a single pipe of three or four inches round the Melon pit? if so, at what height? Or would it be better to have a pipe along the front, with the return-pipe lower, and how much lower? Should I use tan, or leaves, or manure, or a mixture, for the Melons? and how much space should I leave for it? Will a single pipe round the new house be sufficient? or is it better to have a flow and return pipe all along the front; or will it require a double pipe all round? I wish to be able to keep Ferns and a few stove plants in it. How large a boiler is required? How is the house to be ventilated? There were sliding lights in a similar one that I saw. I think you prefer crown glass to common sheet. I think of carrying the smoke along the front of my Vinery, which is very near, to a chimney in the back wall, and thus supplying heat to the front, which is the only defect that I now find from the use of my Arnott stove.—A. L. M."

As already intimated, much of this case is met by an article the other week. I am inclined, however, to give it this prominence, to prevent the disappointments in Melon-growing that have taken place this and preceding seasons, arising not from any want of cultural skill, but from a deficiency of the means to answer an anticipated result. There are few things of which gardeners of any eminence should be more careful than passing an opinion to amateurs, and the proprietors of small gardens, as to the suitability of this and that mode to accomplish a wished-for effect. The more anxious the proprietors of such little Edens are, the more desirous are they to elicit an opinion from any gardener of note with whom they come in contact—that notability being not unfrequently rather the result of fortuitous circumstances, than of any decided superiority in professional and general intelligence over those brothers of the craft who superintend smaller gardens. A simple Yes! or No! to a question propounded to some of our great gardeners, may carry discomfort and next to ruin into an humble gardener's home; an answer which, in all likelihood, would have been the direct reverse, had the whole of the facts of the case been submitted. They who are the most conversant with gardening and gar-

deners, know thoroughly that first-rate men frequently hold small places, and there display great skill, though on a limited scale. It was an axiom of the far-seeing Loudon, that a small place, to be made the most of, required a first-rate gardener, as well as the garden of a nobleman; and that the degree of anxiety and labour were more than usually supposed equally balanced; as, in the one case, the gardener must exert himself with head and hands; while in the other, the mental energies would be those chiefly brought into exercise.

These matters have been suggested, because I have known of several cases, within a few years, in which gardeners in places, not large, who had been extra successful with Melons, and early ones too, grown on the old dung-bed system, have next to totally failed with such a pit as that suggested by our correspondent, where the bottom-heat was inadequate, and the atmospheric heat the only temperature under command; their employers contending that atmospheric heat was quite sufficient for the growth and ripening of Melons; and because Mr. A. ripened Melons grown in pots, set upon a stage; that therefore there was no difference between Melons ripened in July and August, and those ripened in May; and no difference in temperature *in a bed*, with hot-water pipes *above* the level of the soil, and *in pots*, subjected to the atmospheric temperature of the house.

HEATING PITS.

In this, as well as many similar letters, there is a striking deficiency, which a few lines, to mark the relative position of the houses and pits, would have at once supplied. The propriety of heating the pit, the proposed low house, and carrying the flue through the front of the vinery near at hand, will depend upon the relative position of the houses, and the place where the stock-hole is to be placed; but if these are all right, there will be no difficulty in the matter whatever.

This may be done in two ways, keeping in mind that the lowest part of any pipe must be higher than the top of the boiler, and that for the size of such houses, a medium-sized boiler will be more than large enough. Supposing that the new house intended for stove plants and Ferns is to be most generally heated, the Melon-pit might be heated from that by means of pipes and stop cocks. It will be advisable, in this case, that the pipes in the house, and those in the pit, should be similar as respects that level. It will be seen, by-and-by, that I should recommend a pipe for bottom-heat in the Melon part, but the pipe for top-heat there might be on the same level as for bottom-heat, but not covered over, or all the pipes may be below the bed, with a rough chamber of clinkers and brickbats between the pipes and the soil, and openings, by means of round drain-tiles, or something of that kind, set upright, so as alike to admit heat into the atmosphere of the house at will, and also permitting of the pouring down of water, to give a moist heat, and thus secure moisture, in a state of vapour, to the roots of the Melons, when it would be much against their flavour to pour water on the surface of the soil.

The second mode is what I would prefer, namely: taking the flow-pipe into a small elevated cistern, and from thence taking a pipe to heat each department. It matters but little, then, what may be the elevation of the pipes in the various departments, provided the highest point of the highest of them is a foot or two below the level of the cistern, and the lowest point of the lowest pipe is higher than the top of the boiler. If bottom-heat, therefore, is wanted at a considerable depth, the boiler must just be sunk in proportion. The only difficulty in this, as suggested some time ago, is, that sinking deep in many districts involves some outlay for keeping the stock-hole and the furnace dry in all weathers, by means of drainage.

MELON CULTURE.

I will now advert to the particulars of this Melon-pit, because it so happens this case is merely a type of some dozen more that require a hint in the way of—*beware* to expect too much from certain circumstances, such as the mere supply of a hot-water pipe for top-heat, drying the atmosphere, &c.; all very nice, if too much is not expected from it.

The pit, as already seen, is sixteen feet by eight feet, divided into partitions, and is three-and-a-half feet in height at the front, higher behind, two feet out of the three-and-a-half being sunk in the ground, and no means of giving heat from the outside. It strikes me, in answer to the various questions—

1st That to commence Melons in March, there is not a sufficiency of depth of pit to admit a sufficiency of fermenting matter to keep up a healthy bottom-heat until the Melons approach maturity, and that unskillfully managed, the pipe for top-heat may be more prejudicial than otherwise. I wish this latter idea to be thoroughly understood, because some of our readers are apt to attach something like miraculous powers to the mere presence of a hot-water pipe, and make many a gardener sigh after his dung-beds and frames. Allowing, at the best, eighteen inches for soil and top room, there would only be two feet in front, and, perhaps, a foot more behind, for sweet fermenting matter. Now, to supply a kindly bottom-heat for Melons, commencing in March, and with no assistance from linings, and the cold earth outside acting as carriers away of the heat, I should like to have from three to four feet of dung and leaves well sweetened, or from two-and-a-half to three feet of good tan, if used separately, well turned, aired, and somewhat dried, so as to secure a steady, instead of a blazing heat. I would dispense with a foot of this tan, and eighteen inches of fermenting matter, were I to commence in April; and to those with limited means, the first and second week of that month is early enough for securing good Melons with but little trouble. If there was a top-heat water-pipe, it would then only be wanted on extra cold, gloomy days.

Our correspondent may ask, as another correspondent lately asked, privately, how it was possible the hot-water pipe might act prejudicially? With something like two feet of sweet tan, and rather more fermenting dung in a sweet state, you will have enough of heat for the Melons as first in March; and by means of the water-pipe, you keep up the temperature to from 70° to 78° during the day, and from 60° and upwards at night. By-and-by the heat at the bottom declines; you use your pipe-heat to keep up the temperature; this does not warm the soil as the rays striking through the glass do; the air is also likely, even with care, to get too dry in fine weather, or, if evaporating-pans are used, to become too loaded with moisture in dull weather. In the first case, you pay court to his majesty the Red Spider; and in both, but especially the latter, you encourage an extension of the shoots without a corresponding root-action, and the consequence is, that if the shoots do not become weak and unhealthy, the fruit either refuses to set, or will not swell freely, work your surface-pipe as freely as you may. In such circumstances, possessing merely the command of surface-heat, I have found, in my own experience, and I have noticed the same thing in the practice of some of my friends, that such early Melons would do little but expand into leaf, and a forest of small, not over-robust shoots; and that these same plants have afterwards produced a good, nay, a very fine crop, when, owing to the sun gaining strength in May and June, and a sufficiency of heat was procured without any necessity for using the surface heating-pipe; in other

words, all went as well as could be, when the reciprocal action between roots and tops was restored, by both getting the requisite amount of temperature. But, be it observed, that in these cases a similar result would have been arrived at, and a great saving in disappointment and lost labour effected, if the Melon plants had been turned out six weeks later. One gentleman, to whom I assigned these reasons as causes of failure in getting early Melons, in exactly similar circumstances, has had trenches cut down by the sides of his pit, as deep, rather deeper, than the pit inside; and by means of linings, kept up the requisite amount of bottom-heat from 70° to 80°; and since then there has been no difficulty whatever, while the use of the pipe enables him to give air more freely, and keep a dry atmosphere when desirable.

Another correspondent has suggested that there seems some discrepancy between these ideas and the growing of Melons successfully in pots; "these pots, as in your case, often standing exposed on curbs, platforms, &c." But I see no discrepancy, but rather confirmation strong. In addition to the roots being less likely to get into a soil sour and saturated and cold, by giving the requisite waterings in the early part of the day, it will be seldom that the soil in the pots will be lower in temperature than the atmosphere of the house. At any-rate, when the pots stood elevated in a house, and when I used to grow Melons rather largely, I never observed those in pots suffering, as those I have mentioned, from deficiency of bottom-heat, when planted out in a bed in the usual way. I recollect an instance in point, and in a pit very similar to our correspondent's. There was plenty of piping to keep up the requisite amount of temperature, but there were no means of getting that heat below the shallow bed of fermenting matter, so as to act directly on the roots. Next season the fermenting matter was dispensed with altogether, the Melons were put out in large pots, and set not on the floor, but on the top of other pots turned topsy-turvy; a rough trellis was made by taking strings from rafter to rafter, to which the Melon shoots were applied, and nothing could have succeeded better; the only drawback was the amount of fuel necessary to keep up the heat, a matter of importance to all not near a coal pit or close to a railway station. In this case, it will at once be seen that the same stimulus was given to roots and shoots, a matter, I believe, of first-rate importance to the producer of good, early Melons. I next answer the other questions in a few words.

A single pipe, four inches diameter, round the pit would be sufficient for top heat. Either so placed, or as a flow and return in front, it would grow Melons without bottom-heat, as I have mentioned for pots, after the middle of April. To commence in March, you would require two for surface and two for bottom-heat. The pipes for top-heat may be one foot below the front-wall plate, and those for bottom-heat low enough to admit of six inches of clinkers over them before placing on the fermenting matter and soil. For Melons and Cucumbers grown with bottom-heat, from hot-water, I prefer having no fermenting matter whatever, as the plants are too gross when the roots reach it. As to the mode of doing this, each mode suggested has its advantages and disadvantages, as has been previously discussed. Taking two flow-pipes for top-heat, and returning them under the bed for bottom-heat is the most simple mode. Sometimes you might want bottom-heat when the weather was such that you had rather be without top-heat; but any danger here is easily obviated by keeping evaporating pans on the pipes, and giving a greater portion of air. This inconvenience would be remedied by having a pipe all round, or a flow and return for top-heat, and another flow and return for bottom-heat; and you can plug up either at the cistern, as desirable. You will thus have an addi-

tional plug to look after, but you can thus supply heat at pleasure where you want it. After April, two pipes placed low enough to permit of rubble and soil above them, and openings, as previously alluded to, would do for both top and bottom-heat, but three would be better, two flows and one return.

2. The contemplated span-roofed house will be a most useful and economical one. It will be best to have the sashes fixed. Give air at the sides, by ventilators, every four feet in the wall, made of board, fifteen inches by nine, or thereabouts, and opening such opposite the pipes. Have moveable ventilators at the ridge, as lately described, or a foot at the ridge might be made so as to be elevated for half the length from each end, by a wheel and screw, and when let down fitting into a groove. You will want the pipes round the house to keep some plants well in winter. It matters not whether these are side by side, on a level, or the one above the other; but notice what was said lately on having a small air-pipe inserted at the highest points.

3. We do not prefer crown-glass, unless for the front of ornamental houses—quite the reverse; British sheet, or Hartley's patent, will answer for roofs admirably.

4. I have grown Melons very well in a pit heated by a flue underneath, a chamber being formed with logs of wood laid across, and openings at the sides to let up the heat at pleasure. I recollect, however, of a flue bursting, and destroying the Melons in a few minutes with the noxious exhalations. If your flue at the bottom was not very bad, it might be worth while repairing it; the drawback is, that one explosion may do such mischief. R. FISH.

ENGLISH LARKS ON LONG-ISLAND.—We have received a very welcome note from a friend, informing us that the English sky-lark has become domesticated upon our Long-Island shores. We think it will be of interest to many to learn the facts, and we therefore take the liberty of publishing the letter, though not meant for publication:

"DEAR SIR: I have just read in your new book entitled 'Star Papers,' of your high-wrought enthusiasm at hearing the English sky-lark, as he rose from the dewy grass singing up to heaven. I think, sir, that I can sympathise with you in your admiration for this world-renowned songster, for I have often greeted the sun at his rising, that I might have a morning song before resuming my daily studies. But I heard him on Long-Island. The veritable English sky-lark is now acclimated, civilized, and naturalised as an adopted American citizen, and is to be found in the neighbourhood where they were first placed in quite large numbers. About ten years ago a wealthy Englishman, living at East New-York, L. I., set a pair of valuable larks free, for the very purpose of introducing them into this country. He has succeeded admirably, and deserves the commendation of all lovers of birds and song. Though I have spent my life in the same neighbourhood, I regret to say that I cannot now recall the name of this public benefactor. If, sir, you should ever wish to hear the cause of one burst of your eloquence in your 'Star Papers,' take an early ride to East New-York, inquire for Mr. Simmons, who will direct you where you may often go to hear your favourite bird.

"Yours, etc."

We mean to take an early opportunity of hearing these foreign singers. We have heard, for the first time this year, in Brooklyn, a singing bird, among the trees between Hicks and Willow-streets, that is unlike any of our native songsters, and so much resembles the sky lark that we remarked the fact to friends before receiving this letter. It was between 4 and 5 in the morning that we heard it, on several successive days. If these gracious warblers have taken a fancy to

Brooklyn trees, we give them a cordial welcome, and pledge ourselves to stand between them and any native American prejudices on the part of home birds. We have perceived some tokens of jealousy on the part of one fellow, to the manor born—a Shanghai—in a neighbouring yard, who has several mornings redoubled his exertions with most asthmatic results. This is a jealousy entirely unnecessary. We do not think an English sky-lark will ever be able to surpass Sir Shanghai in his own peculiarly melodious song. Let there be peace between the top and bottom of the tree!

Attempts have been made to domesticate the nightingale, without success hitherto. We know not the causes of failure. We know not why all the European songsters may not be imported and bred in our woods and fields. Already foreign fish have been domesticated in our waters, and we know not why the process should not go on.—*New York Independent*.

STEPHANOTIS FLORIBUNDA CULTURE.

WE have now abundance of handsome and free-flowering stove plants, but none that possess so many good and first-rate properties as the one I have selected and placed at the head of this article. It may seem superfluous to write on the culture of a plant so universally grown, but I have had enquiries from correspondents desiring information as to the reason why their plants do not flower; and one enquires why his plant does not thrive; and as there may be others equally as unsuccessful, a brief essay on the means of overcoming these difficulties will, I have no doubt, be acceptable.

There is here a large plant of this charming and universally-admired stove climber now in full flower. It nearly covers the roof of a small propagating-house. This day I counted upwards of fifty bunches of perfect flowers as white as snow, some bunches with as many as ten blooms to each, and more with eight and nine flowers of a larger size than ordinary, and scores of bunches have been gathered since May for the London bouquets. It is quite a sight worth seeing, and has been and is still in the best condition, still growing, and showing more bunches of flowers advancing to perfection. This plant was a large one when it was purchased at Mr. Ambrose's sale at Battersea, two years ago, for fifty shillings, and has proved to be a cheap plant, even at that large sum. Some of my visitors will have it that it is a variety, on account of its blooming so very freely, and at the same time producing such large bunches and large individual flowers. It may be so, though I never could perceive any different marks sufficiently distinct to constitute a variety. However, as I have been so successful in blooming it, I am in a position to answer the enquiries of our correspondent by detailing the culture I have adopted with such success.

HISTORY.—*Stephanotis floribunda* was introduced into this country about 1839, from that little-known Island, Madagascar, and has, consequently, only been known in culture about fifteen or sixteen years. In 1840, I was gardener to T. Brocklehurst, Esq., at the Fence, near Macclesfield. I remember well Mr. Knight, of Chelsea, sending a small plant of it there with this remark:—"This plant you must have; it is the best plant I ever sent out; and so you will find, though it has not yet flowered in England." That Mr. Knight was correct in his estimate of the merit of this plant hundreds of cultivators can testify. There are four points or properties required to constitute a really good plant; namely,—first, fine evergreen foliage; second, handsome, sweet-scented flowers; third, abundance of bloom produced in succession for a long season; and fourth, easy of culture and propagation. All these the *Stephanotis* has in the highest degree.

DESCRIPTION.—Foliage medium size, dark green, oval-shaped, thick and leathery, persistent, that is ever-green. I have known leaves in perfection for seven years. Flowers in corymbs averaging, in healthy plants, from eight to ten blooms in each, produced from the axils of the leaves, sometimes (though rarely) terminal. Calyx, or flower-cup, five-parted. Corolla very stout; a monopetalous tube an inch-and-a-half long, with five spreading, rather reflexed limbs; in the specimen now before me nearly two inches across. Colour a pure white. Perfume very powerful, but agreeable. Stamens and anthers fine; very short pistillum; and stigma solitary; and the latter placed above the anthers, and pointed. Germen oval, swelling, when ripe, to a considerable size. Fruit not wholesome, though tasteless. Seeds numerous. It belongs to the Natural Order of *Asclepiads* (closely allied to the genus *Hoya*), and belongs to the Linnæan class and order, *Pentandria monogynia*.

SOIL.—In order to induce this plant to grow well and flower freely, a somewhat peculiar compost is necessary. It should be open, rich, and light. I find the following answers well. Well-decayed hotbed dung one-part, very turfy peat two parts, turfy loam one-part, half-decayed leaves one-part, with a free addition of silver sand, to be well mixed, but not broken; and at the time of potting a considerable number of pieces of charcoal should be mixed in amongst the compost. This open, rich compost allows the roots to run freely amongst it. To put the compost into a plainer shape,—it should be composed of one peck of dung, two pecks of sandy, very turfy peat, two pecks of turfy loam, and one peck of leaves; the whole to be mixed with small pieces of charcoal and plenty of sand. This compost will suit all plants of a similar character. If a soil is used of a closer and finer texture, the plants may grow well for a time, but they will not flower freely, and are very apt to damp off at the collar, if too much watered at any time; and if kept too dry, the ball of earth becomes so hard that the roots cannot penetrate, and then the plant will not thrive.

POTTING.—As the soil I recommended is of an open texture, the young plants, if healthy, may have a large shift; I do not fear potting such a plant from a six-inch pot into one double the size. As the mechanical character of the above compost is open, it may be pressed down pretty firmly, and will bear a liberal allowance of water without any fear of injuring the roots. The pot should be thoroughly and well-drained, to carry off the superfluous water, and the compost should be well-aired, and used when neither wet nor dry.

POSITION.—If there is a bark-bed in the house, the plant will thrive better if the pot is plunged up to the rim in the bed. I prefer pot-culture to planting-out in the border, because the roots are then more under the control of the cultivator. If there is no bark-bed, the pot may be placed in any convenient corner. My plant has the pot placed at one end of the house near the hot-water pipes, which keep the roots warm and dry.

TEMPERATURE.—In winter the heat should never exceed 55°, unless the sun shines, when it may be allowed to rise to 60°. In severe frost my plant very often has to endure a heat as low as 45°. With this low temperature the plant is kept quite at rest, and as the days increase in length the heat is allowed to rise to 65°, when the plant begins to put forth short, stubby shoots, and fine, broad, healthy leaves; and a month afterwards growth has commenced, the flower-buds begin to show themselves; the heat is then increased to 70° by day, with sun; and then the buds advance rapidly, and the plant sends forth long shoots, more buds are visible, and the first soon expand and bloom. When the flowering season is over, the heat is gradually lowered, and the plant ceases to grow, and once more is allowed to go

to rest. It is this change of temperature, combined with a less amount of water, that causes the plant to flower so freely.

PROPAGATING.—There is no stove plant more easily propagated. Choose cuttings that are short, trim off the lower leaves, and insert the cuttings in sand; place them under a hand-light, on a heated surface; they will quickly root. I seldom lose a single cutting. Pot them off as soon as roots are formed; replace under the handlight for a week, shading from sun. In a fortnight they may be fully exposed, re-potted, and then manage as directed above.

T. APPLEBY.

DEATH OF DR. JOHNSTON.—Science has sustained a loss in the death of the naturalist, Dr. George Johnston, which took place at Berwick-on-Tweed, on July 30th, in the fifty-eighth year of his age. He is known by his works on various branches of natural history. He was educated for the medical profession. He took his degree of Doctor of Medicine in 1819, and settled as a general practitioner of medicine at Berwick-on-Tweed. Here his taste for natural history became developed, and by his researches and publications he has rendered the town—next to Selborne—one of the most classical localities in Great Britain. His principal papers on natural history have been published in the "Magazine of Natural History," the "Annals of Natural History"—of which, latterly he was one of the editors, the "Transactions of the Natural History Society of Newcastle," and the "Proceedings of the Berwickshire Naturalists' Club." These papers indicate the wide range of his sympathies with natural objects, his remarkable powers of observation, and sound and cautious judgment. The work for which he is perhaps best known is his "History of British Zoophytes," which is the most complete and accurate account of the British forms of these animals we yet possess. The original work was published in Edinburgh in 1838, and a second edition appeared in London in 1847. The work is beautifully illustrated by Mrs. Johnston. Whilst working at the Zoophytes, the Sponges and Corallines did not escape his notice; and in 1842 he published "A History of British Sponges and Lithophytes." This work, like the last, is still the best and most complete in our language on the subjects to which it relates. In the list of his papers many will be found devoted to the Mollusca, indicating his great attention to this department of natural history; and as the result of these labours, he brought out, in 1850, his "Introduction to Conchology; or, Elements of the Natural History of Molluscous Animals." This is a repertory of interesting facts, pertaining to the structure and habits of the shell-fishes of Great Britain, and a necessary work in the library of every working naturalist. During the preparation of the foregoing volumes he was working at a very neglected branch of British zoology—the Annelida, the true worms of the naturalist. His papers on "British Annelides" and "Irish Annelides," in the "Annals of Natural History," are well known to naturalists; and it will add to the regret that all who knew him must feel at his loss to know that he was labouring at a complete work on British Annelids when his sudden seizure deprived him of life. His last work, "Botany of the Eastern Borders," shows that no natural occurrence escaped his scrutinizing observation. He was a botanist as well as a zoologist; and it was his critical eye that first detected in the waters of the Blackader the new water-weed (*Anicharis Alsinestris*). His labours were the result of leisure moments. From 1819 to 1853 he was actively engaged in a harassing country medical practice. That he never shrank from its claims is well known; but whilst doing all this work,

his friends, and those who visited him from a distance, were surprised to find him one of the most social of men. He was an active member, if not founder, of the Berwickshire Natural History Club, a pleasant association of naturalists, who pursue their favourite objects in the open fields and by the sea-side, and afterwards meet together at the social board. Dr. Johnston was also the founder of the Ray Society, and up to the time of his death took an active interest in its proceedings and publications.—*Athenæum*.

THE FLOWER-GARDEN THIS SEASON.

HAVING, in a former communication, commented on the fruit crops of the present season, and remarked on the general features of the past spring and early summer, I now offer a few remarks on the Flower-garden, and the effects produced on it by the somewhat singular weather we have passed through; for though flowers, especially annuals and bedding plants, are in a great measure influenced by the assistance or neglect they receive at our hands, yet a favourable or unpropitious season exercises quite as much, if not more, power on their welfare. The present season affords many instances of plants differing much from their ordinary habits, and in many instances they have, in the present season, done better than for many years. On others a contrary effect has been produced.

ROSES.—I do not remember whether I have or not, on a former occasion, mentioned that the soil of the neighbourhood in which I write is not exactly adapted to Roses. Certain it is, that in the majority of seasons they do not do well, and that the present one should be an exception to the general rule, affords no conclusive argument that the soil has changed its character, but rather that the weather and other external influences has effected the improvement. The winter, certainly, was severe, and we lost a few of our Tea-scented kinds, and some were injured, but not to any great extent; the soil being dry, and last autumn fine, they had every chance to ripen well, and the result has been an excellent crop of flowers of superior size, and the plants healthy and free from vermin; and the Chinas, Perpetuals, and others, seem inclined to flower on through the month of August without that intermission which is usually the case at this time.

YUCCAS.—Although these are rarely classed amongst flowering-plants for general display, yet, as they are as handsome as any, I give them a place here. I have never seen them flower so abundantly as they have done this season. In ordinary years, one plant, in five or six, flowers, but this season they have almost all flowered. I mean the large, hardy varieties, as *Acutinata*, *Gloriosa*, and *Aloifolia*. The two former, especially, have done well; but the latter has not done so well, some of the spikes of flowers never having advanced to the proper height, dying or decaying before they fairly opened. This I could not exactly account for, as the cold, inclement weather was all gone before they advanced so far. In many respects, however, the Yuccas have been very fine this season, and unusually early, spikes of bloom showing themselves by April. The smaller species, as *Y. filimentosa*, and its varieties, usually flower well, but this season they are quite eclipsed by their taller brethren. And I further take the opportunity to observe, that few plants have greater claims to attention, for their beauty and singularity, than the Yucca, and I hope, as the public at large are now directed to pay some regard to the foliage and general appearance of a plant, as well as to its flowers, that we shall see the Yucca restored to its accustomed place in garden scenery.

RHODODENDRONS.—I am sorry I cannot boast of any-

thing remarkable in these; only, as this class of plants presents one of the most gay features in the garden at the proper season, I may here observe, that the past spring (or, at least, that part of it in which the Rhododendron was in bloom) was very dull and cold, thereby prolonging the flowering of this lovely plant. Here they always flower well, but the dryness of the situation prevents their growing much, that we do not possess such luxuriant specimens as many who are favoured with a soil more congenial to their wants. A large *R. arboreum*, twelve feet high, blooms profusely every year, and receives no protection whatever.

FUCHSIAS.—These are said to be so hardy as not to require either protection or attention; nevertheless, the last winter has been fatal to many plants that have stood ordinary winters. Some large plants of *F. Ricartonii*, whose stems had stood the test of many winters, and had assumed quite a hard-wooded tree appearance, were killed by last winter's frost. I mean, the stems were killed to the ground; the plants, of course, growing as strongly as before, as likewise did all the plants of that kind elsewhere; but some plants of *F. Carolina* were killed, as also were some of *Globosa*, and all the light-coloured varieties; but these usually suffer, and I do not know that I ever remember of *F. fulgens* standing any winter. However, we may regard the past winter as having tried the Fuchsia very much, so that we may safely pronounce the Fuchsia bloom as below an average, although no blame is attached to the plants that now exist which are blooming as freely as ever.

SHRUBS AND CLIMBERS.—The former have not differed much from the majority of seasons; some tender plants were, of course, quite killed, as *Cytisus*, *Veronica*, &c., but more than one plant of *Coronilla glauca* survived the winter, and bloomed profusely. And I do not think the severity of the winter injured the flower-buds of well-ripened plants, for the *Wisteria sinensis*, and other plants, flowered well; and I see a large *Catalpa* promises to be well laden with bloom likewise. Yellow and White *Banksian* Roses were good; and the same may be said of most ordinary flowering shrubs, &c.

HARDY HERBACEOUS FLOWERING-PLANTS have been about as usual, only I do not remember when the *Heartsease* were so free from mildew as they have been this season; and the prevalence of insects in some seasons is sadly against such plants as *Double Catch-fly*, and others. This year they have all been clear; and the frequent and heavy showers we had the latter part of July has maintained the *Phlox* tribe in better health than usual, as these plants often suffer with us from continued dry weather; but showery weather is not without its disadvantages, as flowers fall or are washed off by the rain before their proper time.

BEDDING GERANIUMS.—Although we had a very good planting-out season, the progress these plants made was but slow for some time; the atmosphere was cold, although the ground was not so, so that the middle of June arrived before any advance of any account had been made in the growth of the various parterre plants. Some hot weather setting in towards the end of the month, produced a little change, but they did not progress so fast as was expected; however, they have since then done pretty well; only, at the time I write, early in August, they are more profuse in foliage than in bloom; the growing showers, no doubt, contributing to that. But although I plant a great many of these, I do not plant many kinds, as past experience has proved to me that many of them do not at all times succeed equally well, and in a given set of beds the failure of one or two destroys the harmony of the whole.

GERANIUMS have done tolerably well, except on soils too rich, where they have run more to leaf than flower, and, as a class of plants, are deserving every encouragement. I have a garden, or rather a regular series of

beds, devoted entirely to this plant, but the want of a good yellow, like the *Calceolaria*, is sadly felt. However, with the *Unique*, *Variegated*, and *Scarlet* varieties, there is a tolerable show, or rather there will be, if drier weather sets in, for latterly, as I have before observed, the season has been more advantageous for the growing than the flowering of this class of plants. One variety I am rather disappointed in, the *White Horse-shoe class*, as *Hendersonii* and *Boule de Nieve*; for when in beds they are dull and weedy looking, while the *Scarlet Ivy-leaved* is an acquisition, and the *Flower of the Day* is a real gem. I could say the same of *Golden Chain*, but it is so shy a grower, that I hardly know what to make of it. Peat evidently suits it best. *Moore's Victory*, and *Rouge et Noir* have also been good, but the *White* and *Scarlet Unique* are inferior to *Rollisonii*, for general display, while *Tom Thumb* still reigns king amongst the dwarf *Scarlets*, but for novelty of shape *Harkaway* is not without its merits. The general class of greenhouse varieties do not do well, but the old *Prince of Orange* (sweet-scented), *Fair Helen*, and some other sweet-scented varieties, I plant for cutting for nosegays, and, of course, some of the *Lucia rosea* breed, and several beds of *Mangle's Variegated*.

CALCEOLARIAS.—The present season has not been so favourable for *Calceolarias* as I expected it would be, for the half-herbaceous kinds are far from being so fine as they were last year. I mean *C. Sultan*, and others, that I suspect this fine variety is going off like *Kentish Hero*, and others, which we seldom now see in perfection. Neither have the more hardy shrubby kinds done so well as on some former occasions, and the bright yellow section, as *Amplexicaulis*, have certainly done very badly, but as I always mix these with a more robust variety, the evil is not so much felt. *C. Shankleyana*, *Kentish Hero*, and some other of an intermediate class, have done worse than any, they partaking more of the herbaceous character; while a bed of seedlings from *C. Sultan* was very gay at one time, but a blank of flowers has since succeeded, which, however, is promised to be followed by another flowering season. They have all been good, but not better in habit than their parent.

Not having time to enumerate all the varieties of bedding plants, suffice it to say, that *Petunias* have done better than usual. *Cupheas* not so well. *Verbenas* have been good, and the same may be said of *Lantanas*, while, perhaps, the most showy plant I have had in beds is one but little grown in many places, the *Double-white Feverfew*, which, flowering early, is an acceptable accompaniment to the flower-garden, and though it goes out of flower by August, a little management in the way of planting the beds not wholly at once will keep up a tolerable succession. I usually plant white *Petunias* with it, if the bed be entirely a "white one;" but the plant is best adapted for a mixed bed, when in June and July it is very showy. *Salvias* I plant but few of, neither have I many *Gaillardia*, nor *Ageratum*, except in mixed beds, for I find the number of plants adapted for massing is much fewer than many people make them, while, in a mixed bed, any number, or almost anything will do; while at the same time some plants suited for massing do not do well in a mixed bed—*Verbena* for instance.

J. ROBSON.

DR. ALLMAN has been nominated to the vacant Chair of Natural History at Edinburgh, in the room of Prof. Edward Forbes. Dr. Allman will commence his lectures in November.

RHYNOSPERMUM JASMINOIDES CULTURE.

THIS charming plant is a climber, with white, sweetly-perfumed flowers. I call it the *Stephanotis* of the greenhouse, on a small scale, the leaves and flowers being smaller than that plant. It was, when first introduced, cultivated in the stove, but has proved hardy enough for the greenhouse, and as greenhouses are more plentiful than stoves, it may be more extensively grown. Every one that has a greenhouse, however small, ought to procure a plant of this pretty flower. It is not difficult to cultivate, though it requires a somewhat peculiar treatment, which peculiarity I will endeavour to describe. It is a native of China, from Shanghai, and is rather a new plant, having been introduced about nine or ten years.

DESCRIPTION.—A twining evergreen shrub, with oval-shaped leaves, smaller and thinner than the *Stephanotis*. Flowers pure white, produced in neat bunches, at the ends of the young shoots. Each flower is about the size of a sixpence, and is beautifully curled at the edges. As it is a slender-growing plant, it is a proper subject to train to a trellis of almost any form. The finest plant I have seen was one exhibited by the Messrs. Fraser, nurserymen, at Lea Bridge. That plant was trained on a pillar-shaped trellis, five feet high, and half-a-yard through, which it completely covered, from the pot to the summit, and had on it, I may venture to say, a thousand blossoms. It does not require, however, to be of so large a size before it blossoms. I have had plants blooming when six inches high, in four-inch pots. This spring, I had a plant of it in a six-inch pot, not more than half-a-yard high, that was so full of flowers that the leaves could scarcely be seen. The season of blooming extends over several months, namely, from April to August. I have plants now showing bloom. This long season adds to its merit.

SOIL.—Like the *Stephanotis*, this plant requires a rich, open, light soil. Turfy peat, vegetable-mould, and light, sandy loam in equal parts, forms a compost in which it will grow and flower well. Add to it a liberal addition of sand, and drain the pot well.

POTTING.—The best time for this operation is in March, just before the plant begins to grow. If it is in a six-inch pot, and has healthy roots, it may be repotted into a pot two inches wider, and no more, for this is one of the peculiarities of this plant, that it will not bear a large shift and bloom freely. When in a large pot, a young plant will make long, strong shoots, but none, or very few flowers; hence it is necessary to keep it underpotted. It then sends forth numerous side-shoots, and every one of these produces at its point a bunch of flowers.

WATERING.—When growing rapidly, this plant requires a moderate supply of water, but by no means should it be slushed. Give just enough to keep it advancing, and no more. In September, lessen even that, and in the dark months of winter keep it comparatively dry. The great object to be aimed at is to prevent a too great luxuriance in growth, and to induce it to stop growing entirely in winter. This is another peculiar point of culture this plant requires. As I said above, it produces its flowers at the ends of the shoots; hence it is desirable to cause as many shoots to spring forth as possible. This it will do, if a rest is induced during winter, and this cessation of growth will be attained if the soil in the pot is kept nearly dry in winter, and the temperature lowered to from 40° to 45°—the usual heat of a greenhouse. When the spring weather arrives, the plants will have accumulated vigour or strength, and the then increased heat, fresh soil, and more moisture at the root, will cause almost every bud to break and produce a head of flowers.

TRAINING.—It will flower well on a flat, circular,

shield-like trellis, but I prefer an upright pillar-shaped trellis, either made of wire, or a number of sticks thrust in close to the rim of the pot, and kept in their place by an iron ring, the same diameter as the pot, placed at the top of the stakes, and each stick tied to it at equal distances. Wire-trainers, however, are the best, because, if kept painted, they last almost for ever. As the plant is naturally a twiner, it requires constant attention to prevent the shoots twisting together, or round the uprights of the trellis. This propensity would soon cause confusion and irregularity, unless the shoots are kept constantly trained in a regular manner round and round the trellis, so that every side and space is covered alike with shoots. When so carefully trained, the plant will form a dense evergreen pillar, which, during the blooming season, will be covered from top to bottom with bunches of white, deliciously-scented flowers.

It will be of great service to the plant if it be placed out-of-doors, in a sheltered situation, on a bed of coal-ashes for a month or two after the bloom is over—taking care, however, to remove it into the greenhouse before any frosty nights come to nip the tender shoots. This exposure gives a robust character to the shoots, and induces a more stiff, healthy growth, besides keeping under the Red Spider, which sometimes attacks and preys upon the foliage.

PROPAGATION. *By cuttings.*—The best are the short side-shoots, though any will grow readily. Prepare, in May or June, a cutting pot in the usual way, that is, half-full of drainage, covered with either moss or rough siftings, and then filled to within an inch with the compost; that remaining inch to be filled up with white silver-sand. Take the cuttings off, trim off the lower leaves, and plant the cuttings in the sand. If a cucumber or melon-bed is at work, place the pot of cuttings in it, giving water previously. Shade from bright sun till they begin to grow, then gradually harden them off, and pot them into small pots, replacing them in the frame till fresh roots are formed; then place them in the greenhouse, subjecting them to the regular routine of management. If no hot-bed is handy, then place the cuttings under a hand-light in a warm stove or propagating house; treating them in a similar way as to shading and potting off.

T. APPELBY.

SEASONABLE NOTES.

ALTHOUGH the various appliances of good cultivation tend in a great measure to overcome the consequences of a backward season, yet there are some which no management can entirely control; winter must cause winter effects, in spite of all that can be done; and even the establishment of whole acres of "winter garden," in the sense it is generally understood by covered-in spaces, must still, more or less, succumb to the iron-bound king of the season, or the equally potent, dull, cheerless atmosphere which prevails at that time. But as it is unlikely for extensive glass structures to take the place of kitchen-gardens, it would be well to consider what can be done to remedy some of the evils we suffer under from a protracted severe winter.

Gardening, like many other pursuits requiring that degree of foresight which alone commands success, it is important that the party entrusted with the duty of prying into futurity should be possessed with those discriminating qualities which alone entitle his policy to respect. Success will alone prove this, and *vice versa*; and, as I have said, the farthest-sighted may be now and then deceived, from causes over which they have no control.

It would be better not to depend entirely on one re-

source alone; this was exemplified in a pointed manner last year, in numberless instances around here. Large breadths of *Cabbages*, which had been sown and planted out about the time they usually were on former years, ran to seed in an almost wholesale manner in many places the last spring. This was accounted for in many ways; the most probable one being the fine autumn of last year, where the young plants attained a degree of growth and perfection which they had not been accustomed to in former years; consequently, when spring arrived, which is the usual period for things of that sort flowering, they were ready to start instead of perfecting the vegetable beforehand. Now, if any one has been so far gifted as to foresee the kind of autumn we were likely to have at the time of sowing the seeds, and delayed sowing them for a week or ten days, it is likely the "seeding propensity" would have been avoided, and the crop of 1855 would have been better than it really was; for it was no unusual thing to see the greater bulk of all the early Cabbage plantations start into seed last April. Even varieties that had been tried by former years were more disposed last spring "to bolt" than on any previous occasion.

Now, this ought to teach us not to rely entirely on one sowing alone; for, however well we may have by several years experience found out the precise period when to sow to the best advantage, now and then a case will arise wherein the system is entirely upset, as the one above.

I may here mention that, for the north of England, and very late situations, a little Cabbage-seed may be sown the last week in July, and again the first and second weeks of August, *Lettuce* being sown at the same time; but for the south of England and early situations, the beginning of August will be soon enough, and one or two sowings afterwards, the 12th of that month being a favourite time for sowing that vegetable; this, however, as stated above, is liable to be influenced by the weather so as to nullify its intended uses, that more than one sowing ought to be made use of, lest the particular one fail. I need hardly add that *Cauliflower* and the whole of the *Brocoli* family are subject to the same rule, only the latter are so in a less degree, that we may safely pronounce a fixed sowing-time for all these things as imprudent, however well the causes in all their bearings may have been studied.

I may observe, that the best description of early Cabbage, whether it be the *Fulham*, *East Ham*, *Battersea*, or *York*, or any of the other sections of that family, ought to be sown about the time specified above; and if it should be very dry weather at the time, some watering or shading, or both, should be done, so as to ensure the proper germination of the seed, which is of the utmost importance; and as natural shade for beds of this vegetable is objectionable, on account of their after evil tendency, it would be well to substitute some temporary contrivance. I generally cover the beds, after sowing, with pea-stakes that have done duty elsewhere, and over them scatter a little of the pea-haulm, taking care to give a good watering before this is done, and covering the beds slightly with sifted leaf-mould, which prevents its getting so hard at top as is usually the case when repeated waterings are done on the same ground, even when it is shaded; for, somehow or other, the influence of a dry atmosphere is felt in spite of all the care that can be called into action; nevertheless, a little shading as above has a beneficial effect, and I have always been able to effect a crop, save when the "fly" has been very destructive; but even then much may be done on the small scale of a seedling Cabbage-bed to prevent that enemy from annihilating the whole. A like remedy may be applied to *Cauliflower* and other things, lime, soot, or wood-ashes are all useful, as imparting an unpleasant taste to the small

plant. Some have recommended sulphur to be rubbed into the seed before sowing, but this is not always effectual, and heavy rains afterwards neutralize its effects. A vigorous growth is of more consequence, as that sometimes outgrows the attacks of its enemies before they are able to do it any vital harm.

From the middle of July to the end of August various other crops may be sown. *Endive* may be sown in quantity during July; and plantations made in August and September. *Winter Onions* may also be sown about the middle or third week in August. *Spinach* to stand the winter had better be later; and the last sowing of *Lettuce*, with *Cauliflower*, to stand over winter, need not be sown until the first of September; but *Lettuce* may also be sown before that time, as they are wanted all through the season.

Various crops will also require planting out now, as *Celery* for main crop, the various *Brocolis*, *Brussels Sprouts*, and other winter greens of several kinds; and a good breadth of *Turnips* ought also to be sown two or three times, the last time towards the end of August; in a usual way, the best and richest ground is not the best for winter *Turnips* for culinary purposes, as they are more spongy and soft than when grown on stiff loam, or dry, poor ground; they also stand the winter better when not in a too-luxuriant position; however, the situation ought to be open and free from trees.

Towards the end of July, or beginning of August, is a very good time to take a retrospective as well as a prospective view of all things connected with gardening; and if every thing be done, and seemingly in a promising way, which the season requires up to this time, there is not so much likelihood of getting behind again as there was at an earlier period; for although many important jobs still remain to be done during the season, yet if all be done up to this time which can be done, those afterwards are more in the shape of ordinary routine. At this time of the year a garden always presents, or ought to present, a greater abundance of produce than at any other period. Small fruits of various kinds, in full perfection, and a great profusion of vegetables, greet the eye of the visitor on all directions, unless it be one of those unfortunate gardens which exist in some places, where a dry, barren soil is incapable of resisting the parching droughts of a warm summer; in such places mildewed *Peas*, *Cabbage-worts* blue, and *Onions* the same sickly tint, all betoken that some extensive alterations are necessary with the soil to enable it to resist such a season, as it may, with perfect propriety, be called a "good one" in a national point of view, because a dry, sunny summer is generally a prolific one, in so far as regards the most important products of the earth.

In concluding this chapter of sundries, I may add, that the total destruction of *weeds* is also indispensable during the hot, sunny weather of this month; let this, therefore, be attended to without delay, for much of the general good appearance of a garden depends on the absence of weeds and other litter. Crops, also, that have ceased to be useful ought also to be cleared away, and the whole ground ought to assume that air of *neatness*, without which good cultivation loses much of its value. Digging vacant spaces for other crops must at all times be done; but it is a wrong notion that new dug ground is the best for seeds vegetating upon; on the contrary, that which has been exposed some time to the action of the atmosphere is often best; and as it is important, in all cases, to hasten the germination of important crops, this had better be borne in mind at the proper time.—J. R.

VEGETABLE CULTURE AND COOKERY.

ASPARAGUS.

WHEN Philip Fennel came to be my gardener, thirty-three years ago, he was then a young man, and his head was filled with all sorts of curious notions about gardening matters, which he had picked up from his father and grandfather, who had been in the profession before him. Among other things, he would insist that there were three or four different sorts of Asparagus; that the *Battersea* was the white, the *Gravesend* the green, and the *Giant* or *Grayson's* the largest. I did not know so much about gardening then as I do now, and leaving the matter entirely in his hands, I allowed him to order from the seedsman all three of these sorts, that I might judge which was the best, or that I might enjoy the different qualities of each. I soon found, however, that there was no difference between them, notwithstanding all Philip's eloquence to endeavour to induce me as well as himself to the contrary. The fact is, the growers at Gravesend used formerly to allow their Asparagus to grow longer, and, consequently, to have more green upon it than the London gardeners; and, therefore, that from Gravesend always had the preference. The *Battersea*, being grown as it still is, with very little green upon it, was considered a distinct sort; and the *Giant* or *Grayson's*, being cultivated on very deep and rich soil, attained an immense size, and hence the origin of that distinction; but they are, in reality, identical, and the only apparent difference between them is produced by cultivation.

Asparagus delights in a deep, rich, and light soil, and, consequently, the alluvial deposits of the Thames at Battersea, Mortlake, and Gravesend, furnish the finest productions of that vegetable which are brought to the London market. The object of the cultivator should, therefore, be to imitate this description of soil, as much as possible, by artificial means. For this purpose, the ground should be trenched at least two feet deep, and thoroughly incorporated with an abundant supply of well-decomposed stable-manure—that from old hotbeds, or any of a similar character, being the best. This should be done early in spring. The two modes of furnishing an asparagus-bed are *by seed* and *by plants*; but as the former is the preferable, I shall confine my directions chiefly to it, as producing the finest shoots, though not quite so early as from plants.

The ground being prepared as directed above, early in March lay out the bed four feet and a half wide, and of any length that may be convenient. Let a stout stake, three feet long, be driven down at each of the four corners of the bed, to determine its boundaries; then stretch a line round these four stakes, and with a spade notch out on the inside of the line the form of the bed; being careful not to tread on any portion of the soil which is within the confines of the line, stir the surface within the line, breaking all lumps, and rendering it fine and mellow. Then lay down the line nine inches from each margin lengthways, and this will indicate the position of the two outside rows. Take one row, beginning at nine inches from the end, and with the hand form a small basin an inch deep; in this basin place three plump, healthy-looking seeds, an inch apart from each other, and there leave them, uncovered. At a distance of one foot from this small basin, form another similar to it, in which drop three other seeds, as in the former, and so proceed, at distances of a foot apart along the row, till it is completed, leaving a clear space of nine inches between the last basin and the margin of the bed. Proceed with the other outside row in the same way; and when that is finished move the lines, and mark out two other rows in the centre of the bed, each one foot apart from that on the outside of it, and treat them in the same way as the others, and then the bed will have been sown. Cover the seeds with some fine mould, about three-quarters of an inch thick, and if the weather should continue dry, give occasional waterings till the seeds have vegetated. As the plants grow, add a little more earth to them, and when they are about three inches high, draw out from each basin all except one plant, leaving only the strongest, and then add one inch more earth all over the bed. All that will be necessary during the first season will be to keep them free from weeds. In the end of October, or beginning of November, when the stalks have

ripened and become yellow, they should be cut down and removed, the beds forked over, and covered an inch thick with well-rotted manure and a sprinkling of salt. Should the winter be severe, cover them with long litter, as a protection from frost. In the spring following, about the end of March, or early in April, the beds should be carefully forked over, the manure turned in, the surface raked, and the edges trimmed. It will be four years before a bed from seed will be in full production, but a cutting may be had from it in the third year.

The mode of proceeding for furnishing a bed *with plants* is the same as is given for seeds, with this exception, that where the basins were sown with seeds the same space is to be occupied with a single plant. Liquid-manure, applied at intervals during autumn and spring, will be found an excellent stimulant for increasing the strength of the plants.

In cutting the heads of Asparagus the knife should never be inserted, except just beneath the surface of the soil, as great danger may arise from injuring the buds; and the heads should always be allowed to attain the length of six inches before cutting, and then be removed nearly level with the surface; in this way, instead of having a hard drumstick of tough vegetable fibre *to suck*, there will be a mass of wholesome vegetable matter *to eat*.

TO BOIL ASPARAGUS.—If the Asparagus is allowed to grow six inches above the ground before it is cut, the usual operation of scraping the stalks before cooking will be unnecessary; but if not, they must be scraped clean. Tie the heads in small bundles with tape, as string will cut them; cut off the stalks at the bottom, so that they may be all of one length, leaving just enough of the white to serve as a handle to the green part; put them into boiling water, into which a handful of salt has been thrown, and when they have boiled from twenty minutes to half-an-hour they will be done enough. Great care must be taken to watch when they are done, for if too much cooked they will lose both flavour and colour. Toast a round of bread about half-an-inch thick, which dip in the water in which the Asparagus was boiled, put it in the hollow of a dish, and lay the Asparagus upon it; serve it up with melted butter in a sauce-boat.

ASPARAGUS SOUP.—To make two quarts of soup will require a pint-and-a-half of the tender green part of the Asparagus cut into pieces of about an inch in length, and boiled till tender. One pint to be rubbed through a sieve to thicken the soup, and the half-pint to be reserved whole. Add these to the soup, and boil for ten minutes or a quarter-of-an-hour.

ASPARAGUS LIKE GREEN PEAS.—For this purpose use the small, slender heads called "sprue." Cut the tender green part, so far as it is perfectly tender, into pieces of equal size of about the third-of-an-inch in length; wash them clean, and then put them into plenty of boiling water, with salt, and a small piece of soda. Boil for ten or twelve minutes, drain them, and spread them on a clean cloth; wipe them gently, and when quite dry put them into a stew-pan with a slice of butter, which should be just dissolved before the Asparagus is added. Stew them in this over a brisk fire, shaking them often, for eight or ten minutes; dredge in a small tea-spoonful of flour, and add half that quantity of white sugar. Then pour in boiling water sufficient to nearly cover the Asparagus, and boil it rapidly till but little of the liquid remains. Stir in the beaten yolks of two eggs. Heap the Asparagus in a dish, and serve it very hot. The sauce should adhere entirely to the Asparagus.

STEWED ASPARAGUS.—Take fifty heads of Asparagus, an endive, a small lettuce, and a small onion, and shred them very fine; then put a quarter-of-a-pound of butter into a stew-pan, to which, when melted, add the shred vegetables. When they have stewed ten minutes, season with pepper and salt, strew in a little flour, shake them about, and add half-a-pint of gravy. Let them stew till the sauce is thick, and pour all into a dish. Garnish with the small tops of the Asparagus.

ASPARAGUS TOAST.—Toast a slice of bread, butter it, and lay it in a dish. Take four eggs, break them well; put them into a saucepan with two ounces of butter, and a little salt, until they are of sufficient consistence, and then lay

them on the toast. Have some Asparagus ready boiled, tender, and cut small, and lay this on the toast.

ASPARAGUS OMELET.—Boil some of the largest and finest Asparagus for twenty-five minutes with a teaspoonful of salt in the water; drain it, and cut it into very small pieces. Beat four eggs very light, and add to them a wine-glassful of cream, a salt-spoonful of salt, and a very little cayenne. Melt a large slice of fresh butter in a frying-pan, and when it has boiled, and the bubbling ceased, put in the asparagus and the eggs, and fry till light and firm; then slip it from the frying-pan to a hot dish, and fold it over.—ROGER ASHPOLE.

UTILITY OF BIRDS.

YOUR correspondents, Hardy and Son, Seed-growers, Maldon, in their zeal for the destruction of our British birds, do not appear to be very logical in the arguments which they advance in support of their cause. They suppose that one peck of grain, or seeds, per acre, is consumed yearly by the joint attacks of "birds, rooks, and vermin;" but they furnish no data of the relative quantities devoured by each class. Birds are held up as the prominent aggressors. Now, when we consider the insidious attacks of insects, in all their multifarious varieties, and that birds are the most effective agents to keeping them in check, self-interest, if no higher motive, should induce us to pause before we pass an unqualified sentence of condemnation upon birds. A month at seed-time, and a month at harvest, birds are troublesome to the farmer and gardener; but this is more than compensated for by their services during the remaining ten months of the year. A skilful agriculturist, and an intelligent observer, near me, who farms about a thousand acres, besides having two other farms of his own, says, that he regards birds as a blessing from Providence, and among the number of the farmers' best friends. Rooks are his especial favourites, and carefully protected by him. Of rooks we are credibly informed that, in some parts of North America, where at one time they greatly abounded, their numbers were so diminished, by rewards being offered for their destruction, and insects so increased, that it became necessary to offer counter rewards for their protection. In many parts of the United States the inhabitants fix a small box on the top of a long pole, and place it in their gardens about their houses, for a particular kind of small bird to build in. "In these boxes the animals form their nests and hatch their young ones, which the parent birds feed with a variety of different insects, particularly those species which are injurious to gardens. A gentleman, who was at the trouble of watching these birds, observed that the parents generally went from the nest and returned with insects from forty to sixty times in an hour, and that in one particular hour they carried food no fewer than seventy-one times. In this business they were engaged during the greater part of the day: allowing twelve hours to be thus occupied, a single pair of these birds would destroy at least 600 insects in the course of one day, on the supposition that the two birds took only a single insect each time; but it is highly probable that they often took more." In my own garden birds are never molested, and they consequently abound to the benefit of the crops. My next neighbour, whose grounds are more extensive, will not allow his gardeners to destroy a single bird, preferring their services to their annihilation. If the ox is not to be muzzled which treadeth out the corn, why should birds, which have been instrumental in preserving it from the ravages of insects during its growth, be shot for venturing to partake of it when it is ripe? In these days of ingenuity, we are not slow at adopting contrivances, and a little timely precaution, when corn and fruit are in season, might surely suffice to guard them from the depredation of birds, without forming clubs for their wholesale destruction.

A volume might be written containing facts and testimonies on the utility of birds. They are not of human institution; they are created by God for our benefit; and we certainly fulfil His designs, and promote our own interests more by preserving than destroying them.

Insects constitute a large portion of their food, and the supply and demand act simultaneously upon each other. If

birds were withdrawn, insects would increase to such a degree that vegetation would be stopped, and the air would be choked with them. If birds be lessened in numbers unduly, the evil takes place to a proportionate amount. The balance is altered, and the law of reciprocity broken.

Let the arrival of our migratory birds be withheld for only one summer, when insects multiply, and the pages of THE COTTAGE GARDENER would teem with accounts of the disastrous results. But the consumption of insects is not the only service which birds render us; they devour the seeds of wild plants which would otherwise spread to our discomfort and the detriment of vegetation.

The subject, if fairly and dispassionately viewed, and especially in reference to the design of a beneficent Creator, so far from exciting our reprobation, ought to call forth our admiration, gratitude and love.—S. P., *Rushmere*.

P.S.—Happening a short time since to be in company with a few gentlemen, one of them made a slightly disparaging remark on the weather; he was corrected by another, and acknowledged his error. "I ought to have known better," he said, "for I was once travelling in the West of England, alone in a post-chaise, and had leisure to look about me, when my attention was caught by the fields of wheat, nearly ripe, which for a great extent lay flat upon the ground, and appeared destroyed; a few ears only remained standing. So heavy a loss led me to question the doctrine of a particular Providence. I passed on, however; completed my visit, and was returning a fortnight later, when I could not resist the temptation to get out of the carriage and examine the phenomenon more closely, particularly as a blight had attacked the crops in my absence. To my astonishment, I found that the prostrate ears had nearly recovered their erect position—that they were sound and good, whilst the few ears which had been left standing were black and destroyed. Thus, what I, in my short-sightedness, had been inclined to regard as a public calamity, was a benevolent act of Providence for its prevention."

ISLE OF WIGHT POULTRY EXHIBITION.

THIS was held on the 7th and 8th instant, in a tent erected in a grass field near Ryde, or rather about half-a-mile from that town. It was a hazardous locality, for if the weather had been unpropitious the receipts from visitors would have been very limited. On the second day, a Poultry auction was held in another tent erected in the same field. We have not heard the results of that sale, but judging of the probable biddings from the quality of the fowls collected there as an extra stock for sale, we think the prices cannot have been such as to induce a renewal of this mode of vending. It has failed, generally, wherever attempted.

The number of pens was small, only 130, and with the exception in the *Coloured Dorkings* and *Coloured Shanghai Chicken* classes, there was little competition. In many classes there were only two pens, and in some of the classes all the pens belonged to one exhibitor! The old *Coloured Dorkings* were generally good, as were the *Coloured Shanghai* chicken, but we doubt much if one of the alleged pullets in the second-prize pen had not fully attained to henhood. The *Aylesbury Ducks* were generally very fine birds, and the first prize would probably have gone to another pen than it did if the bills of the birds had even approached the requisite colour. Great attention was paid to the feeding of the birds, and very great credit is due to the gentlemen of the Committee for their exertions.

The judges were Mr. J. Baily, Mount-street, London, and H. Hinxman, Esq., Durnford House.

The following is their award of prizes:—

Class 1.—SPANISH.—6. First prize, W. Plummer, Esq., Bristol. 3. Second prize, Mr. W. Saunders, Egypt House, Cowes. Highly Commended.—5. P. P. Cother, Esq., Salisbury. Commended.—1. Mr. G. W. Locke, Newport. (Cock prize, No. 6, Mr. Plummer.)

Class 2.—SPANISH CHICKEN, 1855.—14. First prize, W. Plummer, Esq., Bristol. 11. Second prize, Mr. G. W. Locke, Newport.

Class 3.—DORKINGS (Coloured).—16. First prize, W. A. Warwick, Colchester, Essex. 17. Second prize, John Vaux, Esq., Barfield Lodge, Ryde. Highly Commended.—19. Mr. Wm. Saunders, Egypt House, Cowes. (Coloured.) Commended.—20. Mr. Wm. Saunders, Egypt House, Cowes. (Coloured.) 21. Mr. Wm. Saunders, Egypt House, Cowes. (Silver Grey.)

Class 4.—DORKING CHICKEN OF 1855.—22. First prize, Mr. Wm. Saunders, Egypt House, Cowes. (Silver Grey.) 24. Second prize, Mr. Wm. Saunders, Egypt House, Cowes. (Silver Grey.) Highly Commended.—23. Mr. Wm. Saunders, Egypt House, Cowes. (Silver Grey.)

Class 5.—DORKINGS (White).—28. First prize, Mr. N. Antill, Portsea, Hants. 29. Second prize, Mr. G. Ray, Ivy Cottage, Munstead, Hants.

Class 6.—DORKINGS (White).—Chicken of 1855.—31. First prize, Mr. Charles Dain, Southampton. 32. Second prize, Miss Fleming, Binstead.

Class 7.—COCHIN-CHINA (Coloured).—34. First prize, Mr. R. Griggs, Dibden, near Southampton. 35. Second prize, J. Vaux, Esq., Barfield Lodge, Ryde.

Class 8.—COCHIN-CHINA (Coloured).—Chicken of 1855.—40. First prize, Mr. J. W. Kelleway, Ryde. 44. Second prize, Mr. P. Jones, Fulham. Highly Commended.—43. Lord de Blaquiére, Woodlands, Hants. (A meritorious class.)

Class 9.—COCHIN-CHINA (White and Black).—46. First prize, Mr. N. Antill, Portsea, Hants. 47. Second prize, Mr. Wm. Saunders, Egypt House, Cowes.

Class 10.—COCHIN-CHINA (White and Black).—Chicken of 1855.—49. First prize, Mr. Wm. Saunders, Egypt House, Cowes. 48. Second prize, J. R. Rodbard, Esq., Bristol. (White.) (Cock prize, No. 48, J. R. Rodbard, Esq.)

Class 11.—GAME FOWL (Reds).—53. First prize, T. P. Mew, Esq., Cowes. 51. Second prize, J. R. Rodbard, Esq., Bristol. (Cock prize, No. 53, T. P. Mew, Esq.)

Class 12.—GAME FOWL (Reds).—Chicken of 1855.—57. First prize, T. P. Mew, Esq., Cowes. 54. Second prize, J. R. Rodbard, Esq., Bristol.

Class 13.—GAME FOWL (Duckwing).—59. First prize, T. P. Mew, Esq., Cowes. 58. Second prize, J. R. Rodbard, Esq., Bristol.

Class 14.—GAME FOWL (Duckwings).—Chicken of 1855.—63. First prize, T. P. Mew, Esq., Cowes. 62. Second prize, J. R. Rodbard, Esq., Bristol. Cock Highly Commended.—61. Mr. J. Downer, Brixton.

Class 15.—GAME FOWL (White and Piles).—65. First prize, T. P. Mew, Esq., Cowes. (Piles.) 66. Second prize, T. P. Mew, Esq., Cowes. (Piles.)

Class 17.—GOLDEN-PENCILLED HAMBURGH.—71. First prize, T. P. Mew, Esq., Cowes. 70. Second prize, T. P. Mew, Esq., Cowes. (Cock prize, No. 71. T. P. Mew, Esq.)

Class 18.—GOLDEN-SPANGLED HAMBURGH.—73. First prize, Mr. Robert James, Farnham.

Class 19.—SILVER-PENCILLED HAMBURGH.—75. First prize, T. P. Mew, Esq., Cowes. 76. Second prize, Mr. R. James, Farnham.

Class 20.—SILVER-SPANGLED HAMBURGH.—78. Second prize, Lord de Blaquiére, Woodlands, Havant, Hants.

Class 21.—POLANDS (Black with White Crests).—84. First prize, Mr. T. P. Edwards, Lyndhurst. 83. Second prize, Mr. T. P. Edwards, Lyndhurst. Commended.—81. Mr. Isaac Harvey, Newport.

Class 22.—GOLDEN POLANDS.—85. First prize, T. P. Mew, Esq., Cowes.

Class 23.—SILVER POLANDS.—88. First prize, Mr. Parkins Jones, Fulham. 87. Second prize, Mr. T. P. Edwards, Lyndhurst. (Cock prize, No. 88, Mr. Parkins Jones.)

Class 24.—BANTAMS (Gold and Silver-laced).—91. First prize, Mr. Casteels Cooper, Guildford. (Silver.) 92. Second prize, Mr. Casteels Cooper, Guildford. (Gold.)

Class 25.—BANTAMS (White).—94. First prize, T. P. Mew, Esq., Cowes. 93. Second prize, T. P. Mew, Esq., Cowes. (Cock prize, No. 94, T. P. Mew, Esq.) A meritorious class.

Class 26.—BANTAMS (Black and other varieties).—97. First prize, Mr. Wm. Saunders, Egypt House, Cowes. (Game.) 100. Second prize, T. P. Mew, Esq., Cowes. (Black.) Highly Commended.—101. T. P. Mew, Esq., Cowes. (A meritorious class.)

Class 27.—DISTINCT BREED.—107. First prize, Lord de Blaquiére, Woodlands, Hants. (Cuckoo Cochins-China.) 104. Second prize, Mr. Wm. Saunders, Egypt House, Cowes. (Brahma Pootra.) 105. Cock prize, Mr. Wm. Saunders, Egypt House, Cowes. (Brahma Pootra, Pencilled.) Highly Commended.—108. Mr. Hervey Ickwell, Bury, Bedfordshire. (Silk Fowls, from China.) 111. Mr. H. B. Higgs, Southampton. (Black Ghoudooks. Imported.)

Class 28.—DISTINCT BREED.—Chicken of 1855.—114. First prize, Mr. Wm. Saunders, Egypt House, Cowes. (Brahma Pootra.) 113. Second prize, Mr. Wm. Saunders, Egypt House, Cowes. (Brahma Pootra.)

Class 29.—GEESE.—117. First prize, C. W. Estcourt, Esq., Newport. 119. Second prize, W. A. Warwick, Esq., Colchester. Commended.—121. Mr. T. P. Edwards, Lyndhurst.

Class 30.—DUCKS (Aylesbury).—122. First prize, Mr. J. W. Kelleway, Ryde. 124. Second prize, Mr. T. P. Edwards, Lyndhurst.

Class 31.—DUCKS (Rouen and other varieties).—126. First prize, Mr. N. Antill, Portsea, Hants.

Class 32.—TURKEYS.—130. First prize, Mr. Wm. Saunders, Egypt House, Cowes. (Cambridge Greys.) 129. Second prize, J. R. Rodbard, Esq., Bristol. (Cambridge Greys.)

A Piece of Plate, a Silver Cream Ewer, given by W. G. Ward, Esq., was awarded to Mr. Saunders, of Egypt House, Cowes, as the most successful Hants exhibitor.

A Piece of Plate, a Silver Cup, given by the Committee, was awarded to T. P. Mew, Esq., of Cowes, as being the most successful exhibitor.

A Piece of Plate, a pair of Silver Salt Cellars, for the best Pen of Turkeys, was awarded to Mr. Saunders, of Egypt House, Cowes.

THE HOUSEHOLD.

THE great use of a public journal is to communicate the thoughts and actions not only of individuals, but of communities and people from one to another; and its great aim should be that the substance of its communications should be such as will conduce to the comfort, the pleasure, or the advantage of all. We are most anxious to bring our readers into communication with each other on matters connected with the household, believing that much good and profit may arise from such intercourse. We have already furnished some receipts for preserving fruits, and we have to-day some from a correspondent on the same subject of a very interesting character. On all matters which pertain to the household, we shall be glad to have the experience of our readers, who, being so numerous and so widely-distributed, might make this department of our journal a medium for information on these subjects, such as is to be found in no other quarter.

PRESERVING FRUITS.—I shall, at least, give pleasure to some of our juvenile readers, if I can persuade their mamas that Preserves and Jams are not quite so expensive as they are sometimes thought to be. I make mine according to rule, and carefully weigh and measure, thereby proving that ordinary Jams may be made (irrespective of the cost of fuel and labour) at from 3d. to 4½d. per lb., which, used in moderation, are cheaper than butter. Two years since, I made a Jam, thus—12 lb. Red Currants, 4 lb. ditto Raspberries, 16 lb. Loaf Sugar; boiling it three-quarters-of-an-hour (by-the-by, fifteen minutes too long) with a loss of 1 lb. on the whole quantity, purchasing fruit at the then current Bath prices—the cost of which Jam was 3½d. per lb. I have this year preserved a bushel of unripe Gooseberries without sugar, thus,—the fruit of the Cockspur kind carefully picked and placed in ordinary quart bottles, without water; the bottles suspended, *uncorked*, by twine and sticks, in a boiler of cold water—the water reaching to the bottom of the necks of the bottles, the fire gently brought on until the water is just below boiling point, and kept at *this* heat one hour; the bottles then filled with water which has been boiling some time in another vessel; corked and sealed with wax while hot; laid on their sides; to be turned daily for a few weeks, then once a week for a time, and then once a month, until used. Thus, at 1½d. per quart (purchasing Gooseberries by the bushel, and irrespective of fuel and labour,) may gooseberries for pies and puddings be had throughout the winter, when fruit is so much desired and needed by adults as well as children. I have Gooseberries in house now thus preserved about three years since, some of which lot, when eaten last winter, were said by my friends to be as good in flavour as if but just picked from the trees. Cherries I have had, similarly preserved, three or four years. I do not mention other things, such as Green Peas, lest they should prove only “may be’s”—the above are “has beens.” I propose, however, trying this season to preserve Scarlet Runners, &c., in the same way; and if it succeeds, it will only be necessary to place the bottles or jars containing them in cold water, bring it to the boiling point, and they are cooked fit for table.—J. W. C. W., *Nightingale Cottage, Bath.*

THE GOOSEBERRY CATERPILLAR.

SEVERAL letters having lately appeared in different horticultural periodicals, recommending various modes of destroying this devastating scourge, but none having had exactly the desired effect, I would suggest, with the fullest confidence in its success, the following receipt, which I can vouch to be an infallible remedy, having applied it for thirty years, and never known it fail.

Make a strong decoction of *Digitalis* (Foxglove), and syringe the leaves of the tree affected with a common Mac

Dougal's syringe, or a watering can; the former is preferable, particularly if an inverted one, so that the liquid may get under the leaves, as then there will be less chance of the rain washing it off. A dry day must, of course, be chosen for the application, and in two days after the grub will be found destroyed, the fruit remaining perfectly uninjured. The decoction is made by roughly gathering the Foxgloves, leaves and flowers, indiscriminately, and boiling them about a-quarter of an hour in water. One dressing suffices for the year.—RICHARD UNDERHILL, *Edgbaston, Birmingham.*

DERIVATION OF NEMOPHILA.

I BELIEVE that your correspondents have been severally both right and wrong with regard to the orthography and derivation of *Nemophila*.

Looking only to the laws of language, I should be inclined to adopt the form “*Nemophyllum*.”

There is, it is true, the Greek word νέμος (*nemos*), but it does not signify “a grove,” or “wood;” but rather, like Virgil's “*saltus*,” a “woodland pasture” or “forest-glade,” in which cattle-feed. It occurs in Homer's *Iliad*, XI., 480.

The most serious objection to the common derivation (if, at least, botanists entertain, as they do not always, a due respect for the laws of language) is this, that “*Nemophila*” would not signify “loving a glade;” but “beloved by a glade.” That is, if “*philos*” in Greek is transitive, it is placed at the *beginning*; if passive, at the *end* of a word. A “lover of the Gods,” for instance, is “*Philotheus*,” a “favourite of the Gods,” *Theophilus*, or, “*Theophiles*.”

While on this subject, I will notice a sad travestie of the original in a late number of *THE COTTAGE GARDENER*. Here it is, literally transcribed, punctuation and all:—

“*Principiis obsta sero medicina paratur;*

Per longas morbi quando crevere moras.”

Instead of

“*Quum mala per longas convaluere moras.*”

“*Quando*” is next door to a false quantity; “*crevere*” a gross one.

Such blunders may, certainly, plead the high authority of Lord Lyndhurst, who (receiving thereon a due meed of parliamentary applause) made Virgil speak thus of Fame—

“*Ingrediturque solo, et caput in æthere condit.*”

Truly the Iron Duke was not far wrong when he advised a young nobleman not to quote Latin.—ROBERT BLACKBURN, *Selham Rectory.*

[We do not remember the quotation. Will our correspondent oblige us by naming the page? ED.—C. G.]

VINEGAR-MAKING ANIMAL.

I COPY the following remarks from a book recently published, entitled “*The Chinese Empire, by M. Huc*,” they may serve to throw some light on similar subjects which have been already introduced into *THE COTTAGE GARDENER*. The first relates to the *Vinegar Animal*. The writer, whilst staying at one of his lodgings in the province of Kiang-si, enquired if they had any vinegar; “I have some,” replied the landlord, “but I am afraid you will not like it, it is the *Polypus* vinegar, made by the animal itself.” “*Polypus* vinegar! oh, we are acquainted with that; it is the best vinegar that can be got. But how does it happen that you possess such a treasure as a *tsou-no-dze* (vinegar *Polypus*)? Were you ever on the coast of *Leao-tong*?” “Yes; some years ago, I was sent on an expedition into that country, and I brought back a *tsou-no-dze* with me.” This *tsou-no-dze* is a creature that, on account of its extraordinary property of making excellent vinegar, merits particular mention. It is a monstrous assemblage of fleshy and glutinous membranes, tubes, and shapeless appendages, that give it a very ugly and repulsive appearance; you would take it for an inert, dead mass; but when touched it contracts and dilates and assumes various forms. It is an animal whose structure and character are not better known than that of the other *Polypi*. This *tsou-no-dze* is found in the Yellow Sea, and the Chinese fish for it on the coasts of *Leao-tong*, but

it is rather scarce. Possibly it may be more abundant in some other places, where it is neglected from ignorance of its peculiar property.

This Polypi is placed in a large vessel filled with fresh water, to which a few glasses of spirits are added, and after twenty or thirty days this liquid is found transformed into excellent vinegar, without going through any other process, and without the addition of the smallest ingredient. The vinegar is as clear as spring-water, very strong, and of a very agreeable taste. After the first transformation the source appears inexhaustible; for as it is drawn off by degrees for consumption, it is only necessary to add an equal quantity of pure water, without any more spirit, and the vinegar remains equally good.

The tsou-no-dze, like the other Polypi, is easily propagated by germination; you detach a limb, which vegetates and grows, and in a short time is found to possess the same property of changing water into vinegar. These details are based not only on the best information we have been able to collect, but we ourselves possessed one of these Polypi, and kept it for a year, using constantly the delicious vinegar it distilled for us. At our departure from Thibet, we presented it to the Christians of our mission in the Valley of Black Waters."—S. P. Rushmere.

(There are many insects which secrete acetic acid, or vinegar. Among these acid-secreters are the Red Ant, and the Slimy Grub, which feeds on our Pear-leaves. The Slimy Grub, when crushed, smells strongly of vinegar. The acid secreted by the *Formica rufa*, or Red Ant, differs somewhat from vinegar, and has been called Formic acid.

It was first publicly noticed by Mr. Ray in the year 1670.* Dr. Hulse had written him that he had found this passage in *Langham's Garden of Health*, "Cast the flowers of cichory (*Cichorium Intybus*) among a heap of ants, and the flowers will soon become as red as blood." He mentions that the fact had been observed before by various individuals, among others by John Bauhin. Dr. Hulse said that he had tried the experiment and found it to succeed. Mr. Fisher had stated to Mr. Ray, several years before, that, "if you stir a heap of ants so as to rouse them, they will let fall on the instrument you use a liquor which, if you presently smell to, will twinge the nose like newly distilled oil of vitrol." Mr. Fisher farther stated, that, "when ants are distilled by themselves or with water they yield a spirit like spirit of vinegar, or rather like spirit of *viride aeris*." It dissolves lead and iron. When you put the animals into water, you must stir them to make them angry, and then they will spirt out their acid juice." Margraaf obtained this acid in 1749, by distilling ants mixed with water and rectifying the liquid which came over. The acid obtained had a sour taste and smell. It combined with potash and ammonia, and formed crystallizable salts with both.—ED. C. G.)

THE VINTAGE AND THE VINTAGERS.

(Continued from page 283.)

Or course, it is quite foreign to my plan to enter upon anything like a detailed account of wine-making. I may only add, that the refuse skins, stalks, and so-forth, which settle into the bottom of the fermentation vats, are taken out again after the wine has been drawn off and subjected to a new squeezing—in a press, however, and not by the foot—the products being a small quantity of fiery, ill-flavoured wine, full of the bitter taste of the seeds and stalks of the grape, and possessing no aroma or bouquet. The Bordeaux press for this purpose is rather ingeniously constructed. It consists of a sort of a skeleton of a cask, strips of daylight shining through from top to bottom between the staves. In the centre works a strong perpendicular iron screw. The *rape*, as the refuse of the treading is called, is piled beneath it; the screw is manned capstan fashion, and the unhappy seeds, skins, and stalks, undergo a most dismal squeezing. Nor do their trials end there. The wine-makers are terrible hands for getting at the very last get-at-able drop. To this end, somewhat on the principle of rinsing an exhausted spirit bottle, so as, as it were, to catch the very flavour still clinging to the glass, they plunge the

doubly-squeezed *rape* into water, let it lie there for a short time, and then attack it with the press again. The result is a horrible stuff called *piquette*, which, in a wine country, bears the same resemblance to wine as the very dirtiest, most wishy-washy, and most contemptible of swipes bears to honest porter or ale. Piquette, in fact, may be defined as the ghost of wine!—wine minus its bones, its flesh, and its soul!—a liquid shadow!—a fluid nothing! an utter negation of all comfortable things and associations! Nevertheless, however, the peasants swill it down in astounding quantities, and, apparently, with sufficient satisfaction.

And now a word as to wine-treading. The process is universal in France, with the exception of the cases of the sparkling wines of the Rhone and Champagne, the grapes for which are squeezed by mechanical means, not by the human foot. Now, very venerable and decidedly picturesque as is the process of wine-treading, it is unquestionably rather a filthy one; and the spectacle of great brown horny feet, not a whit too clean, splashing and sprawling in the bubbling juice, conveys at first sight a qualmy species of feeling, which, however, seems only to be entertained by those to whom the sight is new. I looked dreadfully askance at the operation when I first came across it; and when I was invited, by a lady, too, to taste the juice, of which she caught up a glassful, a certain uncomfortable feeling of the inward man warred terribly against politeness. But nobody around seemed to be in the least squeamish. Often and often did I see one of the heroes of the tub walk quietly over a dunghill, and then jump—barefooted, of course, as he was—into the juice; and even a vigilant proprietor, who was particularly careful that no bad grapes went into the tub, made no objection. When I asked why a press was not used, as more handy, cleaner, and more convenient, I was everywhere assured that all efforts had failed to construct a wine-press capable of performing the work with the perfection attained by the action of the human foot. No mechanical squeezing, I was informed, would so nicely express that peculiar proportion of the whole moisture of the grape which forms the highest flavoured wine. The manner in which the fruit was tossed about was pointed out to me, and I was asked to observe that the grapes were, as it were, squeezed in every possible fashion and from every possible side, worked and churned and mashed hither and thither by the ever-moving toes and muscles of the foot. As far as any impurity went, the argument was, that the fermentation flung, as scum to the surface, every atom of foreign matter held in suspension in the wine, and that the liquid ultimately obtained was as exquisitely pure as if human flesh had never touched it.

In the collection of these and such like particulars, I sauntered for days among the vineyards around; and, utterly unknown and unfriended as I was, I met everywhere the most cordial and pleasant receptions. I would lounge, for example, to the door of a wine-treading shed, to watch the movements of the people. Presently the proprietor, most likely attired in a broad-brimmed straw hat, a strange faded outer garment, half shooting-coat half dressing-gown, would come up courteously to the stranger, and, learning that I was an English visitor to the vintage, would busy himself with the most graceful kindness, to make intelligible the *rationale* of all the operations. Often I was invited into the chateau or farm-house, as the case might be; a bottle of an old vintage produced and comfortably discussed in the coolness of the darkened, thinly-furnished room, with its old-fashioned walnut-tree escrutoires, and beauffets; its quaintly-panelled walls, and its polished floors, gleaming like mirrors and slippery as ice. On these occasions, the conversation would often turn upon the general rejection, by England, of French wines—a sore point with the growers of all save the first-class vintages, and in which I had, as may be conceived, very little to say in defence either of our taste or our policy. In the evenings, which were getting chill and cold, I occasionally abandoned my room with illustrations from the *Tour de Nesle* for the general kitchen and parlour of Madame Cadillac, and, ensconcing myself in the chimney-corner—a fine old-fashioned ingle, crackling and blazing with hard wood logs—listened to the chat of the people of the village; they were nearly all coopers and vine-dressers, who resorted there after the day's work was over, to enjoy an exceedingly modest modicum of very thin wine.

* Phil. Trans. v. 2063, or Abridgement, i. 554.

I never benefited very much, however, by these listenings. It was my bad luck to hear recounted neither tale nor legend,—to pick up, at the hands of my *compotatores*, neither local trait nor anecdote. The conversation was as small as the wine: The gossip of the place; the prospects of the vintage; elaborate comparisons of it with other vintages; births, marriages, and deaths; a minute list of scandal, more or less intelligible when conveyed in hints and allusions; were the staple topics, mixed up, however, once or twice with general denunciations of the niggardly conduct of certain neighbouring proprietors to their vintagers,—giving them for breakfast nothing but coarse bread, lard, and not even piquette to wash it down with, and for dinner not much more tempting dishes.

In Medoc, there are two classes of vintagers—the fixed and the floating population; and the latter, which makes an annual inroad into the district just as the Irish harvesters do into England and Scotland, comprising a goodly population of very dubious and suspicious-looking characters. The *gen-d'armerie* have a busy time of it when these gentry are collected in numbers in the district. Poultry disappear with the most miraculous promptitude; small linen articles hung out to dry have no more chance than if Falstaff's regiment were passing by; and garden fruit and vegetables, of course, share the same results produced by a rigid application of the maxim that *la propriété c'est le vol*. Where these persons come from is a puzzle. There will be vagrants and strollers among them from all parts of France—from the Pyrenees and the Alps—from the pine-woods of the Landes and the moors of Brittany. They unite in bands of a dozen or a score men and women, appointing a chief, who bargains with the vine-proprietor for the services of the company, and keeps up some degree of order and subordination, principally by means of the unconstitutional application of a good thick stick. I frequently encountered these bands, making their way from one district to another; and better samples of "the dangerous classes" were never collected. They looked vicious and abandoned, as well as miserably poor. The women, in particular, were as brazen-faced a set of slatterns as could be conceived; and the majority of the men—tattered, strapping-looking fellows, with torn slouched hats, and tremendous cudgels—were exactly the sort of persons a nervous gentleman would have scruples about meeting at dusk in a long lane. It is when thus on the tramp that the petty pilfering and picking and stealing to which I have alluded goes on. When actually at work, they have no time for picking up unconsidered trifles. Sometimes these people pass the night—all together, of course—in out-houses or barns, when the *chef* can strike a good bargain; at other times they bivouac on the lee-side of a wood or wall, in genuine gipsy fashion. You may often see their watchfires glimmering in the night; and be sure that were you do, there are twisted necks and vacant nests in many a neighbouring hen-roost. One evening I was sauntering along the beach at Paulliac—a little town on the river's bank, about a dozen of miles from the mouth of the Gironde, and holding precisely the same relation to Bordeaux as Gravesend does to London—when a band of vintagers, men, women, and children, came up. They were bound to some village on the opposite side of the Gironde, and wanted to get ferried across. A long parley accordingly ensued between the chief and a group of boatmen. The commander of the vintage forces offered four sous per head as the passage-money. The bargemen would hear of nothing under five; and after a tremendous verbal battle, the vintagers announced that they were not going to be cheated, and that if they could not cross the water, they could stay where they were. Accordingly, a bivouac was soon formed. Creeping under the lee of a row of casks, on the shingle of the bare beach, the women were placed, leaning against the somewhat hard and large pillows in question; the children were nestled at their feet and in their laps; and the men fomed the outermost ranks. A supply of loaves was sent for and obtained. The chief tore the bread up into huge junks, which he distributed to his dependents; and upon this supper the whole party went coolly to sleep—more coolly, indeed, than agreeably; for a keen north wind was whistling along the sedgy banks of the river, and the red blaze of high-piled faggots was streaming from the houses across the black, cold, turbid waters. At length,

however, some arrangement was come to; for, on visiting the spot a couple of hours afterwards, I found the party rather more comfortably ensconced under the ample sails of the barge which was to bear them the next morning to their destination.

The dinner-party formed every day, when the process of stripping the vines is going on, is, particularly in the cases in which the people are treated well by the proprietor, frequently a very pretty and very picturesque spectacle. It always takes place in the open air, amongst the bushes, or under some neighbouring walnut-tree. Sometimes long tables are spread upon trestles; but in general no such formality is deemed requisite. The guests fling themselves in groups upon the ground—men and women picturesquely huddled together—the former bloused and bearded personages—the latter showy, in their bright short petticoats of home-spun and dyed cloth, with glaring handkerchiefs twisted like turbans round their heads—each man and woman with a deep plate in his or her lap. Then the people of the house bustle about, distributing huge brown loaves, which are torn asunder, and the fragments chucked from hand to hand. Next a vast cauldron of soup, smoking like a volcano, is painfully lifted out from the kitchen, and dealt about with mighty ladlefuls; while the founder of the feast takes care that the tough, thready *bouilli*—like lumps of boiled-down hemp—shall be fairly apportioned among his guests. *Piquette* is the general beverage. A barrel is set abroach, and every species of mug, glass, cup, and jug about the establishment is called in to aid in its consumption. A short rest, devoted to chatting, or very often sleeping in the shade, over, the signal is given, and the work recommences.

"You have seen our *salle à manger*," said one of my courteous entertainers—he of the broad-brimmed straw hat; "and now you shall see our *chambre à coucher*." Accordingly, he led me to a barn close to his wine-cellar. The place was littered deep with clean, fresh straw. Here and there rolled-up blankets were laid against the wall; while all around, from nails stuck in between the bare bricks, hung by straps and strings the little bundles, knapsacks, and other baggage of the labourers. On one side, two or three swarthy young women were playfully pushing each other aside, so as to get at a morsel of cracked mirror stuck against the wall—their long hair hanging down in black elf-locks, in the preliminary stage of its arrangement.

"That is the ladies' side," said my *cicerone*, pointing to the girls; "and that"—extending his other hand—"is the gentlemen's side."

"And so they all sleep here together?"

"Every night. I find shelter and straw; any other accommodation they must procure for themselves."

"Rather unruly, I should suppose?"

"Not a bit. They are too tired to do anything but sleep. They go off, sir, like dormice."

"Oh, *sil plait à Monsieur!*" put in one of the damsels. "The chief of the band does the police." (*Fait la gen-d'armerie*.)

"Certainly—certainly," said the proprietor; "the gentlemen lie here, with their heads to the wall; the ladies there; and the *chef de la bande* stretches himself all along between them."

"A sort of living frontier?"

"Truly; and he allows no nonsense."

"*Il est meme excessivement severe*," interpolated the same young lady.

"He need be," replied her employer. "He allows no loud speaking—no joking; and as there are no candles, no light, why, they can do nothing better than go quietly to sleep, if it were only in self-defence."

One word more about the vintage. The reader will easily conceive that it is on the smaller properties, where the wine is intended not so much for commerce as for household use, that the vintage partakes most of the festival nature. In the large and first-class vineyards the process goes on under rigid superintendence, and is as much as possible made a cold matter of business. He who wishes to see the vintages of books and poems—the laughing, joking, singing festivals amid the vines, which we are accustomed to consider the harvests of the grape—must betake him to the multitudinous patches of peasant property, in which neighbour helps

neighbour to gather in the crop, and upon which whole families labour merrily together, as much for the amusement of the thing, and from good neighbourly feeling, as in consideration of francs and sous. Here, of course, there is no tight discipline observed, nor is there any absolute necessity for that continuous, close scrutiny into the state of the grapes—all of them, hard or rotten, going slap dash into the *cuvier*—which, in the case of the more precious vintages, forms no small check upon a general state of careless jollity. Every one eats as much fruit as he pleases, and rests when he is tired. On such occasions it is that you hear to the best advantage the joyous songs and choruses of the vintage—many of these last being very pretty bits of melody, generally sung by the women and girls, in shrill treble unison, and caught up and continued from one part of the field to another.

Yet, discipline and control it as you will, the vintage will ever be beautiful, picturesque, and full of association. The rude wains, creaking beneath the reeking tubs—the patient faces of the yoked oxen—the half-naked, stalwart men, who toil to help the cart along the ruts and furrows of the way—the handkerchief-turbaned women, their gay, red-and-blue dresses peeping from out the greenery of the leaves—the children dashing about as if the whole thing were a frolic, and the grey-headed old men tottering cheerfully adown the lines of vines, with baskets and pails of gathered grapes to fill the yawning tubs—the whole picture is at once classic, venerable, and picturesque, not more by association than actuality.

And now, Reader, luxuriating amid the gorgeously carven and emblazoned fittings of a Palais Royal or Boulevard restorateur, Vefours, the Freres, or the Café de Paris; or perhaps ensconced in our quieter and more sober rooms—dim and dull after garish Paris, but ten times more comfortable in their ample sofas and carpets, into which you sink as into quagmires, but with more agreeable results,—snugly, Reader, ensconced in either one or the other locality, after the waiter has, in obedience to your summons, produced the *carte de vins*, and your eye wanders down the long list of tempting nectars, Spanish and Portugese, and better, far better, German and French—have you ever wondered as you read, “St. JULIEN, LEOVILLE, CHATEAU LA LAFITTE, CHATEAU LA ROSE, and CHATEAU MARGAUX, what these actual vineyards, the produce of which you know so well—what those actual chateaux, which christen such glorious growths, resemble? If so, listen, and I will tell you.

As you traverse the high road from Bordeaux to Pauillac, some one will probably point out to you a dozen tiny sugar-loaf turrets, each surmounted by a long lightning-conductor, rising from a group of noble trees. This is the chateau St. Julien. A little on, on the right side of the way, rises, from the top of a tiny hill overlooking the Gironde, a new building, with all the old crinkum-crankum ornaments of the ancient fifteenth century country house. That is the chateau Latour. Presently you observe that the entrance to a wide expanse of vines, covering a series of hills and dales, tumbling down to the water's edge, is marked by a sort of triumphal arch or ornamented gate, adorned with a lion couchant, and a legend, setting forth that the vines behind produce the noted wine of Leoville. The chateau Lafitte rises amid stately groves of oak and walnut-trees, from amid the terraced walks of an Italian garden—its white spreading wings gleaming through the trees, and its round-roofed, slated towers rising above them. One chateau, the most noted of all, remains. Passing along a narrow, sandy road, amid a waste of scrubby-looking bushes, you pass beneath the branches of a clump of noble oaks and elms, and perceive a great white structure glimmering garishly before you. Take such a country house as you may still find in your grandmothers' samplers, decorated with a due allowance of doors and windows—clap before it a misplaced Grecian portico, whitewash the whole to a state of the most glaring and dazzling brightness, carefully close all outside shutters, painted white likewise—and you have chateau Margaux rising before you like a wan, ghastly spectre of a house, amid stately terraced gardens, and trimmed, clipped, and tortured trees. But, as I have already insisted, nothing, in any land of vines, must be judged by appearances. The first time I saw at a distance Johannesburg, rising from its

grape-clustered domains, I thought it looked very much like a union workhouse, erected in the midst of a field of potatoes. —(*Claret and Olives.*)

QUERIES AND ANSWERS.

GARDENING.

ROSE STOCKS AND ROSE BUDS.

“Can you tell me what is the best time to procure stocks for budding Roses? and whether there is any rule to guide one in the choice of buds?—H. W.”

[Any time in November is the best for procuring *Rose-stocks*. When you can see the bud at the bottom of the footstalk of the leaf is time for the budding. If you can hardly see the bud, it is *too soon*, and if it is so forward as to be on the point of breaking into leaf, it is *too late*.]

FIG CULTURE.—YUCCA CULTURE.

“I should feel obliged by your giving me your opinion as to the treatment of my Figs. The last winter cut them up very much; but they have recovered, indeed, from the short, strong shoots, and quantity of joints, I should say improved, inasmuch as bringing the fruit nearer to the walls. When should I nip the ends of the shoots, so as to throw them into fruiting, I mean for the next year? What fruit I have promises to be very fine, and all on wood that has been stopped, either artificially, or by the severity of the season.

“I have a *Yucca*, with a stem, or bole, eight inches diameter, with two forks. These forks are grown so high and unfurnished, although one shoot has flowered well this season, that I think of cutting one fork down this season, and when it has grown a shoot to cut the other. I will thank you to say *when* I ought to cut it, and if I run any risk of killing the tree by so doing. What age would you say such a plant was? I must tell you that it had three prongs, one of which was blown off three years ago. It has thrown out a splendid shoot from the bole just where the fork springs from.—FIG.”

[You have the very best criterion of good management in your “short, strong shoots, and plenty of joints.” Now, if all these have sufficient room to let the sun play upon every leaf, and all are tied down close to the wall, rest satisfied that the art of man can do no more for them throughout the whole of this month, and the “nipping,” to cause the buds for the next crop to *swell*, will be time enough, if you begin with it on the bottom part of the trees on the first of September, and finish at the top of the wall by the tenth or twelfth day. When we have a cold, wet June, and a dry July and August, the “nipping” might be finished by the first of September; but having had so much warm rain through the last half of July, the ground is now so moist and so stimulating to the roots of the succulent Fig-tree, that it would be extremely dangerous to stop the growth of the shortest spur shoot all this month. There is no operation against a fruit wall which is more liable to deceive than the stopping of Figs; for if it be done three days too soon, the fruit for the next year's crop may get so forward as to be entirely destroyed during a hard winter, and it is more to save those fruit-buds than the safety of the wood that Fig-trees ought to be protected from frost.

Your handsome *Yucca* may be from thirty-five to forty years old, and now you ought not to trust it to a heavy fall of snow, which often, and last winter particularly, falls too heavy on the leaves, bends them back and breaks them, which spoils the look of the plant for years. A covering with straw, or straw-rope, is the best, and should be in the form of a candle-extinguisher—three long poles to meet in a point a foot above the highest leaf, to be covered so as to throw the drip from the lowest leaf. It is too late now to cut off the second or third head; bear with it as it is till next April; then take it off, by all means, and make a cutting of it. For this cutting, make a hole six inches deep in a light border; place a soft brickbat in the bottom of the hole, and put the bottom of the cutting on the bat, and fill in the earth, and make it as firm as possible round the stem, and rise it an inch or two in a cone round the stem, to throw off the wet for the first few months.]

MANAGEMENT OF ROSES IN CLUMPS.

"I shall feel much obliged by your opinion regarding the planting of some clumps of Roses, which were formerly filled with Perpetuals, pegged down, and looked remarkably well during the fine weather; but late in the season, when the rains here are abundant, the bloom, which was very luxuriant, was entirely destroyed by the wet and the dirt which was washed up from the soil of the bed. I now, therefore, think of putting in budded Roses, of different heights, to rise in the shape of a cone, and would like to know what heights will be best; how far apart they should be planted; and if they should be all of the same sorts—*Bourbons*, for instance, or *Hybrid Perpetuals*?"

"I am inclined to think that budded Roses are not so certain to thrive as those on their own roots (which flourish well here, where the soil is light and dry, and the climate very moist); at least, my Standards are very capricious, often cankering, losing their leaves, and being infested with grub and Green Fly. Those which do best are, *Madame Desprez*, *Geant des Batailles*, *Pourpre de Tyre*, *Mrs. Elliot*, and some others; the most robust growing, in short, including *Julie Dupont*, a pretty Noisette like *Annie Vibert*. The Climbers flourish here, and perhaps the Boursault would prove a better stock than the Dog Rose, which is always throwing out suckers. I budded some Roses, last year, on the *Manetti* stock, which stood last severe winter in the open air, and are now blooming well.

"I tried, last season, a plan suggested in your pages, which has failed with me; namely, planting Roses at each pillar in an avenue, a Climber, a Standard, and a Dwarf; they have, apparently, choked each other, and not more than two have survived at each pillar. The Dwarfs here suffered most, and next to them the Standards; perhaps I did not give them sufficient manure. I must mention that the situation is confined rather, and shady, but has the advantage of shelter.—P., *Argyleshire*."

[This is an oft told tale. We never knew pegged-down Roses to do well; but surely there is moss enough in Argyle to keep all the Roses and cakes in the county safe from "dirt and grit." To make a cone of Roses in a bed would look very pretty indeed, and that is the best practical way to have masses of them, provided they are not planted too close together. One Standard, five feet high, in the centre, and four Standards in a circle round it, and three feet from it, and about four feet high, would be a good beginning. Round these again we would plant a circle of half Standards, three feet high and three feet apart from each other; then another row of bushy plants on their own roots, still keeping to the distances of three feet each way; and while the plants were young we would use *one sort* all round as temporary plants for the first three years. If there was room, we would plant another circle of plants on their own roots just like the last row. Whatever the number of rows, we would have the outside row of one kind, or, at most, but two kinds, in alternate plants; we would mix *Bourbons* and *Hybrid Perpetuals*. In light soils, and in most soils, these classes of Roses do better on their own roots certainly, if we could but bring ourselves to believe so. When an accident, or frost, kills the top of a worked Rose it is done with; but on its own roots it would push up a fresh head better than the first. Then, when a bed is to be altered, Roses on their own roots could be divided into three or four plants, and the big roots would make cuttings, from which the very best plants could be had for nothing. The Boursault is more prone to throw off suckers than the Dog Rose; but it grows anywhere, and all Roses do well on it for a while; then the extra strength goes for suckers, and if you pull them up the Boursault gets sulky, and all is down with it for ever, and no doctoring will bring it round.

The mode of making pillar Roses of a Standard and two Dwarfs is only to get a head in a shorter time; the strongest takes the lead after awhile, and then the other two should be removed, or be cut down; but it is a good temporary plan. One secret for having good pillar Roses is to have no buds below the surface on the cuttings; then those crowds of bottom-shoots, or sucker-like shoots, are got rid of for ever, and the plant is then more balanced in strength all the way up. It is a misfortune when a pillar Rose is allowed to make too many bottom-shoots.]

IS AN UNDER-GARDENER A GENTLEMAN'S GARDENER?

"I beg to enclose a few of the Rules and Regulations of the 'Halifax Horticultural and Floral Society,' and respectfully solicit your opinion to the following question:—

"An individual being the second 'under gardener' in a gentleman's establishment, but having a small plot of ground at his own residence, which he cultivates for the use of his family. In which of the four classes specified in the enclosed rules ought he to exhibit productions grown in the above-named plot of ground?"

"P.S.—The above person does 'not employ artificial heat.'—W. WHITAKER, *Secretary*."

[The rule applicable to the above case is this:—"7. There shall be Four Classes of Exhibitors, viz.:—

"1st. Gentlemen's Gardeners.

"2nd. Nurserymen and Sale Growers.

"3rd. Amateurs, Florists, and Cottage Gardeners, employing artificial heat, or who occasionally employ an assistant.

"4th. Cottagers and Cottage Gardeners."

We are of opinion that the under-gardener in question must be included in the 1st. of your classes—"Gentlemen's Gardeners." It may be hard, in his case, that he cannot exhibit in the 4th class, "Cottagers and Cottage Gardeners," but we must not omit from consideration that the object of such classification is to save the "Cottagers and Cottage Gardeners" from an unequal contest with those who have the advantage of seeds, plants, and skill acquirable by their employment in a gentleman's garden.]

LONDON MARKETS.—AUGUST 13TH.

COVENT GARDEN.

THE market begins now to put on an autumnal aspect. *Apples* are abundant, and *Pears* have made their appearance. Among the former, we recognise our old favourites the *Joanneting*, the *Margaret*, and the *Devonshire Quarrendon*, which realize from 4s. to 6s. per bushel; *Hawthorndens*, and some windfalls for cooking, make 3s. per bushel. Among the *Pears*, we observed several lots of the *Crawford*, of English growth, and *Aminé Joannet*, from France. *Apples* and *Pears*, however, have a very dull sale, as there is so much "soft fruit" in the market. *Coronne Cherries* are abundant and cheap, and there are still a few lots of *Bigarreaux*. *Grapes* are plentiful, and so also are home-grown and West Indian *Pines*. There is, this week, a supply of new *Nuts*, from Algeria, which are brought by steamer to Marseilles, and thence across France by rail! They are quite green, and as fresh like as if they had just been taken from a Kentish growers van. Vegetables continue abundant.

FRUIT.

Apples, kitchen,	
per bushel	3s. to 4s.
" dessert, doz.	4s. " 6s.
Pears	" " "
Apricots, per doz.	2s. " 2s. 6d.
Peaches, per doz.	8s. " 15s.
Nectarines, doz.	8s. " 15s.
Cherries, lb.	2d. " 6d.
Plums	" " "
Pine-apples, lb.	3s. " 6s.
Grapes, lb.	3s. " 6s.
Melons, each	2s. " 6s.
Figs	" " "
Gooseberries, per	
quart	2d. " 4d.
Currants	4d. " 6d.
Raspberries	6d. " 9d.
Strawberries, per	
pottle	4d. " 6d.
Oranges, per 100	4s. " 10s.
Lemons, doz.	1s. to 1s. 6d.

Almonds, per lb.	2s. " "
Nuts, Filberts, lb.	" " "
" Cobs, lb.	" " "
" Barcelona,	
per bushel	20s. " 22s.
" Brazil, per	
bushel	12s. " 14s.
Chestnuts	" " "

VEGETABLES.

Cabbages, per doz.	9d. to 1s.
" Red, per doz.	2s. " 4s.
Cauliflowers, doz.	2s. " 3s.
Brocoli	" " "
Savoy	" " "
Greens	" " "
Spinach, per sieve	1s. " 2s.
Peas, per half sieve	
	1s. 6d. " 2s. 6d.
Beans	" " "
French Beans, per	
bushel	4s. 6d. " 6s.
Scarlet Runners	4s. 6d. to 6s.

COVENT GARDEN — Continued.

Carrots, bunch .. 4d. „ 6d.	Small Salad, per punnet .. 2d. „ 3d.
Parsnips .. „ „ —	Artichokes, each 3d.
Beet, per doz. 1s. „ 1s. 6d.	Asparagus, per bundle.... 1s. 6d. „ 4s.
Potatoes, per cwt. 10s. „ 20s.	Sea-kale, per pun. — „ —
Turnips, bunch .. 2d. „ 6d.	Rhubarb, per bdle. 2d. „ 6d.
Onions, young, bunch..... 1d. „ 2d.	Cucumbers, each 3d. „ 8d.
Leeks, per bunch 2d. „ 3d.	Vegetable Marrow 2d. „ 3d.
Garlic, per lb. .. 6d. „ 8d.	Tomatoes .. „ —
Shallots, per lb. 4d. „ 6d.	Mushrooms, per pottle..... 8d. „ 1s.
Horseradish, per bundle.. 1s. 6d. to 2s. 6d.	
Lettuce, Cos, per score .. 6d. „ 1s.	HERBS.
„ Cabbage 6d. „ 8d.	Basil, per bunch 6d. to 9d.
Endive, per score 1s. „ 1s. 6d.	Marjoram, per bunch .. 6d. „ 9d.
Celery, per bun. 8d. „ 1s.	Fennel, per bunch 2d. „ 3d.
Radishes, Turnip per doz. bunches 1s. „ 2s.	Savory, per bunch 2d. to 3d.
Water Cresses, per doz. bunches.. 6d. „ 9d.	Thyme, per bunch 2d. „ 3d.
	Parsley, per bunch 2d. „ 3d.
	Mint, per bunch 4d. „ 6d.

POTATOES.

Regents, York, per ton 160s. to 195s.	Regents, Scotch, per ton 125s. to 150s.
„ Kent and „ Essex 140s. „ 180s.	Scotch Reds.. 120s. „ 140s.
„ Lincoln 120s. „ 180s.	„ Blues 95s. „ 130s.

GRAIN AND SEED.

WHEAT.	PEAS.
Kent and Essex, red, per qr. .. 70s. to 77s.	Boiling, per qr. 42s. to 47s.
Ditto, white.... 76s. „ 84s.	Common .. 36s. „ 38s.
Norfolk and Suffolk .. 71s. „ 76s.	Grey .. 37s. „ 40s.
Dantzic .. 84s. „ 92s.	Maple .. 40s. „ 42s.
Rostock .. 80s. „ 90s.	SEEDS.
Odessa..... 70s. „ 78s.	Turnip, White, per bush. — to —
American..... 82s. „ 86s.	Swede .. „ —
BARLEY.	Rape .. 84s. „ 86s.
Malting .. 36s. to 38s.	Linseed, sowing 74s. „ 76s.
Grinding and Distilling.... 31s. „ 33s.	„ crushing 70s. „ 73s.
Chevalier .. 34s. „ 36s.	Clover, English, red..... 60s. „ 68s.
OATS.	„ Foreign do. 52s. „ 57s.
Scotch, feed .. 32s. to 33s.	„ White 68s. „ 73s.
English .. 27s. „ 31s.	Trefoil .. 28s. „ 32s.
Irish .. 26s. „ 29s.	Rye .. 40s. „ 43s.
Dutch Broo .. 30s. „ 31s.	Tares .. „ —
Danish .. 28s. „ 30s.	Canary .. 50s. „ 54s.
Russian .. 27s. „ 31s.	Hemp .. 50s. „ 53s.
BEANS.	Linseed Cake, per ton £12 to £12 10s.
Harrow .. 41s. to 43s.	Rape Cake £6 10s. „ £6 15s.
Pigeon .. 42s. „ 48s.	Indian Corn .. 47s. „ 50s.
Tick .. 40s. „ 42s.	

HOPS.

Mid & E. Kent £10 to £12	Sussex .. £8
Weald of Kent £8 to £10	

HAY AND STRAW.

Clover, 1st cut per load .. 110s. to 147s.	Meadow Hay, new 95s. to 105s.
Ditto, 2nd cut 90s. „ 130s.	Rowan .. „ —
Meadow Hay .. 90s. „ 135s.	Straw, flail 30s. „ 36s.
	Ditto, machine 28s. „ 30s.

MEAT.

Beef, inferior, per 8 lbs. .. 3s. 4d. to 3s. 6d.	Mutton, mid. 3s. 10d. to 4s. 4d.
Do. mid... 3s. 8d. to 3s. 10d.	Do. prime 4s. 6d. to 4s. 10d.
Do. prime.... 4s. to 4s. 2d.	Veal 3s. 10d. to 4s. 10d.
Mutton, inferior.... 3s. 4d. to 3s. 8d.	Lamb 5s. 4d. to 5s. 10d.
	Pork, large 3s. 8d. to 4s. 0d.
	Ditto, small 4s. 0d. to 4s. 6d.

POULTRY.

Goslings 5s. to 6s. 6d.	Ducklings 2s. 0d. to 3s. 0d.
Fowls .. 3s. „ 4s.	Pigeons .. 0s. 6d. „ 0s. 8d.
Capons.. 3s. 6d. „ 4s. 6d.	Rabbits .. 1s. 0d. „ 1s. 6d.
Chicken .. 2s. 0d. „ 3s. 0d.	

PROVISIONS.

BUTTER.—Cwt.	CHEESE.—Cwt.
Dorset, fine .. 98s. to 102s.	Cheshire, fine .. 70s. to 84s.
Do. middling .. 80s. „ 86s.	Gloucestershire, double .. 68s. „ 74s.
Fresh, per doz. lbs. 8s. „ 12s.	Ditto, single.... 56s. „ 70s.
Friesland 100s. „ 104s.	Somerset .. 70s. „ 84s.
Kiel .. 96s. „ 100s.	Wilts, loaf 68s. „ 78s.
Carlow .. 94s. „ 98s.	Ditto, double .. 72s. „ 78s.
Waterford 90s. „ 94s.	Ditto, thin 54s. „ 64s.
Cork .. 84s. „ 98s.	Ditto, pines 72s. „ —
Limerick 86s. „ 98s.	Berkeley, thin .. 62s. „ 66s.
Sligo .. „ —	
BACON.—Cwt.	HAMS.—Cwt.
Wiltshire, dried 78s. to 80s.	York, new 80s. to 90s.
Waterford 72s. „ 74s.	Westmoreland.. 76s. „ 86s.
	Irish..... 74s. „ 84s.

WOOL.

Down Teds 1s. ½d. to 1s. 1½d.	Leicester, fleeces .. 11½d. „ 1s. 0d.
Ditto Teds and Ewes 11d. „ 1s. ½d.	Long, heavy do. 11d. „ 1s.
Half-bred Hogs gets 11½d. „ 1s. 1d.	Combing skins 10½d. „ 1s. 1d.
Do. Wethers 11d. „ 1s.	Flannel wool 1s. 1d. „ 1s. 2½d.
Kent Fleeces 1s. ½d. „ 1s. 1d.	Blanket wool 8½d. „ 1s. 0½d.

TO CORRESPONDENTS.

LARGE MOTH (Margaret).—Probably the Privet Hawk Moth. Try Privet for the Caterpillars. These require earth to bury in when full grown.

FERN (Idem).—*Asplenium adiantum nigrum* was called "Oak Fern" by the old herbalists, who applied to it the Greek name *Dryopteris*. We merely give the names which have been given to the species, but do not undertake to justify them. Send us a frond, and we will tell you the name. To give the specific distinctions would occupy space and time unprofitably.

SADDLE BOILER (A Friend).—We do not remember your sketch, nor do we require one; what we need are directions how best to set the boiler. We answer all questions without distinction or favour, so soon as we obtain the information required.

FOWLS PLUCKING EACH OTHER (G. H.).—Put your fowls on a lower diet and give them abundance of green food. You neither tell us how you feed them, nor where you keep them.

THINNING PEACHES AND APRICOTS (Veras).—Beyond all doubt they ought to be thinned out without "waiting to see which will stand." The fruit is being injured, and the trees needlessly weakened.

POULTRY BOOK SUPPLEMENT (S. T. G.).—Write to Messrs. W. S. Orr and Co., Amen Corner, on the subject.

VINES (I).—We do not know the variety called "The Pope's," but have seen the "Mill Hill Black Hambro'" which does not appear to us to possess any merits superior to the old Black Hambro' when that variety is well grown.

TEMPERATURES (J. S.).—We are sorry your table did not reach us. It is now too late.

WOODLICE (D. Ecclestone).—No mode of destroying them is known.

SOOT (A Subscriber from the Beginning).—We are obliged to postpone our notes until next week.

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WEEKLY CALENDAR.

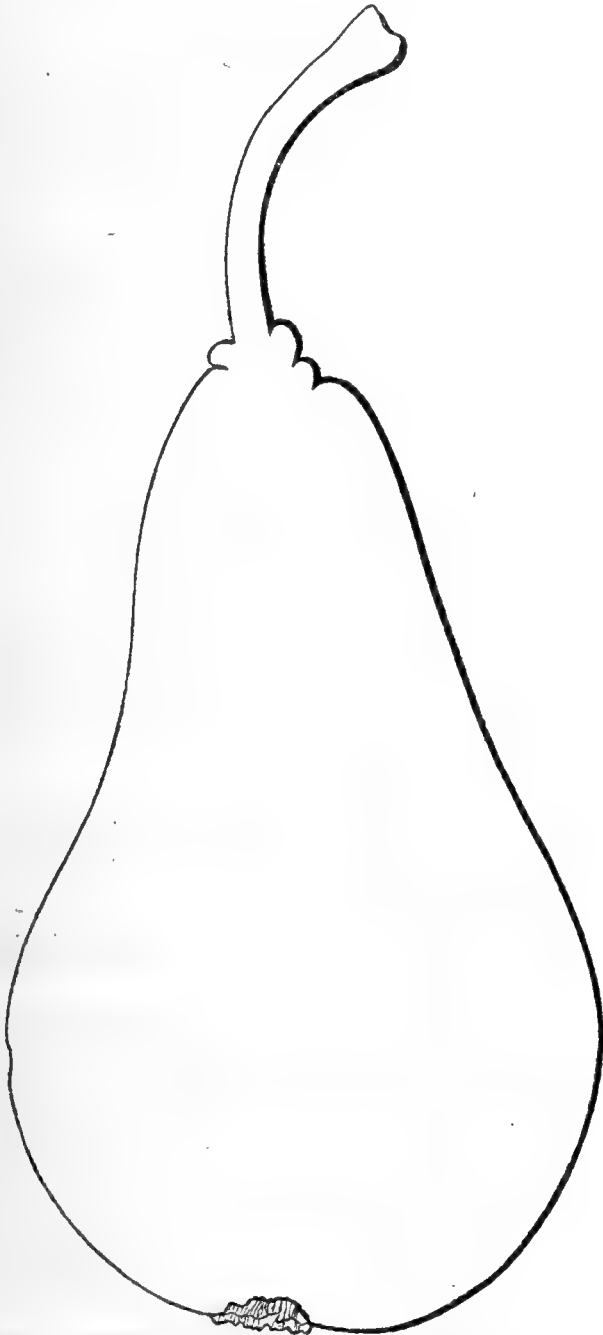
D M	D W	AUGUST 21—27, 1855.	WEATHER NEAR LONDON IN 1853.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in Inches.						
21	Tu	Sun's declinat., 12° 14' N.	29.824—29.765	70—50	S.	—	56 a 4	10 a 7	10 12	9	3 3	233
22	W	Green-veined White.	30.013—29.865	71—41	W.	—	57	8	10 53	10	2 49	234
23	Th	Wood White.	30.108—30.000	67—57	S.W.	08	59	6	11 51	11	2 33	235
24	F	St. Bartholomew.	29.996—29.935	72—47	W.	—	v	4	morn.	12	2 18	236
25	S	White bordered.	30.266—30.158	70—39	N.W.	—	2	2	1 10	13	2 2	237
26	SUN	12 SUNDAY AFTER TRINITY.	30.361—30.330	76—51	N.	—	4	0	2 40	14	1 45	238
27	M	[Pr. ALBERT B. 1819.]	30.398—30.395	79—63	N.W.	—	5	vi	rises.	☺	1 29	239

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 71.4°, and 49.9°, respectively. The greatest heat, 88°, occurred on the 21st, in 1835; and the lowest cold, 32°, on the 21st, in 1850. During the period 114 days were fine, and on 82 rain fell.

THE FRUITS AND FRUIT TREES OF GREAT BRITAIN.

NO. III.

THE WINDSOR PEAR.



IDENTIFICATION.—Park. Par. 592. Miller Dict. n. 7. Fors. Treat. 151. Lind. Guide 350. Hort. Soc. Cat. ed. 3. 439.

SYNONYMES.—La Vindsor Quint. Inst. 199. Bellissime, Merlet Abrégé; Dahuron Traité, 97. Suprême, Merlet Abrégé. Figue Musquée, Acc. Merlet et Dahuron. Grosse Jargonelle, Acc. Merlet. Poire de Bruxelles, Knoop. Pom. 79. Poire Madame, Ibid. t. 1. Madame

de France, Ibid. Belle d'Août, Ibid. Poire de Figue, Ibid. Mouille-bouche d'été, Ibid. Konge, Acc. Hort. Soc. Cat. Brüsseler Birne, Diel Kernobst. xxi. 218. Franz-Madame, Sickler Obstgärt. iv. 35. Cuisse Madame, of some collections, but not of Duhamel. Summer Bell, of American Orchards. Bell-tongue, of the Tweedside Orchards. Green Windsor, in some districts.

FIGURES.—Knoop Pom. t. 1. Lang. Pom. pl. lxi. f. 2. Sickler Obstgärt. iv. t. 3.

In our series of papers on the Fruits and Fruit-trees of Great Britain, it is not our intention to treat merely on the varieties which are new or little known, but to include those, also, however old they may be, or however often they may have been described, of which we can communicate any new facts or information as regards their synonymes, history, or cultivation. It is for this reason that we have selected for this week's subject a variety which is almost universally known, there being few gardens in England where it is not, or has not been, and where even yet, notwithstanding the many new accessions, it is entitled to occupy an honourable place. Common and familiar as it is to many, and often as it has been described, we question if its history has ever been written, or if it has, it has never been our fortune to meet with it.

The fruit is large and handsome, of a long pyriform shape; its greatest width is at about two-thirds towards the eye, whence it forms half of a ball round the apex, and tapers gradually toward the stalk. The skin is smooth and tender, of a bright green colour at first, but as it is ripening, it gradually assumes a yellowish tint, with a mixture of green, and with a faint orange tinge, and obscure streaks of red on the side next the sun; the whole surface is marked with greenish specks. The eye is not at all sunk, but even with the surface, wide open, and with a stout erect calyx. The stalk is an inch-and-a-half long, curved, inserted on the summit of the fruit without any cavity, and generally surrounded with fleshy swellings at the base. The flesh, when the fruit is eaten just at it is becoming yellow at the stalk, is white, tender, buttery, and melting, with an agreeable and pleasant flavour, but if allowed to hang till "dead ripe," it is dry and meally. It ripens in the middle of August. To have the fruit in perfection, it ought to be gathered immediately when it is observed to be changing from the green to the yellow tint, otherwise it will be worthless.

The tree is one of the strongest growers of any variety in cultivation; particularly in its early growth,

the shoots are very thick and succulent-like, but short. It forms an upright, tall, and handsome tree, when grown in an alluvial soil, or in a deep sandy loam, with a cool subsoil; but if the soil is stiff, cold, and humid, it very soon cankers. It is a good bearer, and when grown in a soil favourable to it, we have seen it produce an abundance of very large, handsome, and excellent fruit. It has the property in many seasons of producing sometimes a profusion of bloom at Midsummer, and a second crop of fruit, which, however, is never of any value, from which circumstance it has been called *Poire Figue*, *Figue Musquée*, and *Deux fois l'an*.

The only account of this antient variety we have ever seen is by an English writer, who says "it was raised from seed of the Cuisse Madame, by a person of the name of Williamson, a relation of Williamson, whom Grimwood succeeded in the Kensington Nursery." Grimwood succeeded to the Kensington Nursery somewhere about the middle or latter half of the last century, but the Windsor Pear is mentioned by Parkinson, in his *Paradisus*, in 1629, a century before the Kensington Nursery was in existence, and was even then "well knowne to most persons"; he says it "is an excellent good peare, will beare fruit sometimes twice in a yeare, and (as it is said) three times in some places."

There can be no doubt that the Windsor Pear is of foreign origin, and that it is the *Bellissime* and *Suprême* of the early French Pomologists, but it must not be confounded with the *Bellissime d'été* of these later writers, and of Duhamel, who has made a sad mess of many synonymes, and on whose authority, in these particulars, there is no reliance to be placed. It seems at a very early period to have been distributed over Europe, as we find it mentioned by J. Baptista Porta, in 1592, as being cultivated about Naples under the name of *Pero due volte l'anno*; and even in our own country we find it flourishing even earlier than this; for Sir Hugh Plat, in giving the authority of "Master Hill," who lived about 1563, "Why trees transplanted doe alter," says, "Trees that bear early, or often in the year, as Pear-trees upon *Windsor-Hill*, which bear three times in a year; these though they be removed to as rich, or richer soil, yet they do seldom bear so early, or so often, except the soil be of the same hot nature, and have the like advantages of situation, and other circumstances with those of *Windsor*. And, therefore, commonly, the second fruit of that Pear-tree being removed, doth seldome ripen in other places." This is the first notice we have of the Windsor Pear in England; and it is, doubtless, from the circumstance of these growing on Windsor Hill that the variety received its name. Early in the season, and before the earliest varieties of our gardens are nearly ripe, there are considerable quantities of the Windsor exposed for sale in the Covent Garden Market, which are imported from Portugal, and which are said to be shipped at Oporto. We never could ascertain the name under which they were imported, but have not the slightest doubt about the identity of the variety.

THE following letter leads us to some notes we have often wished to republish, on the employment of Soot as a manure:—

"I shall be very much obliged if you can give or obtain for me information as to the best use to be made of Soot; what crop it is most suitable for; the description of land most benefited by its use (my land is a strong clay marl, adhesive when wet); and what quantity should be used per acre; which is the most advantageous way of using, whether to be worked in the land by harrows at the time of sowing the seed, or is it better to top-dress in the spring? I can obtain large quantities at fivepence per imperial bushel, delivered to my farm. Is it good for wheat, to be used at the time of sowing or drilling the seed? or do you know of any artificial manure which has been proved for that purpose? Can any mixture be added to soot beneficially?—A SUBSCRIBER FROM THE BEGINNING."

In reply, we can say, from actual observation, that there is no crop grown by either the farmer or kitchen-gardener that is not benefited by being manured with Soot. It would be inexplicable if it were not so generally beneficial to plants, for its ingredients are all, more or less, their food; nor could it be otherwise, for the coals from which the soot is generated are remains of antediluvian vegetables.

Soot is that part of common coal which is driven off by the heat of the fire without being decomposed; and as the air which bears it along is cooled, it is deposited on the sides of the chimney. Soot is composed, therefore, of the most volatile parts of the coal; and of some of its most solid parts, in a state of very fine division. It has been analysed, and 1000 pounds found to be composed as follows:—

Charcoal (very fine).....	371 lbs.
Salts of Ammonia (chiefly Sulphate) ..	426 "
„ Potash and Soda	24 "
Oxide (or rust) of Iron	50 "
Silica (flinty sand very fine)	65 "
Alumina (pure clay very fine)	31 "
Sulphate of Lime (Gypsum or Plaister	
of Paris)	31 "
Magnesia (Carbonate of)	2 "

1000

Now every one of the above constituents of soot are constituents also of our cultivated plants. The charcoal buried in the soil is gradually converted into carbonic acid gas, and in that form is sucked in both by the roots and leaves of plants; and all the other constituents are more or less soluble in rain-water, and, consequently, are also taken in by the roots as food for their parent plants.

Having thus shewn that soot might be recommended confidently as a valuable manure, even from a mere knowledge of the substances it contains, let us now see what practical men say, who have tried it in their gardens and elsewhere.

Strawberries.—Mr. Cuthill, of Denmark Hill, Camberwell, who grows this fruit extensively in pots, puts a

large handful of soot over the crock at the bottom of every pot. The roots of the plants, he says, delight in it, and it keeps out worms. He entertains a very high opinion of soot as a manure for all plants, thinking it both beneficial to them as a food, and as a protection against insects. He uses it largely as a manure for *Tulips, Carnations, Potatoes*, and, indeed, to *all his crops* with the most marked success.

Potatoes.—So beneficial has soot been found, when dug into the ground at the time of planting, by Mr. Barnes, Mr. Morton, and others, that some persons have been so sanguine as to think it a preventive of the Potato murrain. Although we do not entertain this opinion, yet we know it to be a capital manure for the Potato. On a light soil, without any manure, the late Rev. E. Cartwright grew 157 bushels of Potatoes per acre; but an acre of the same soil, manured at the time of planting with thirty bushels of soot, produced 192 bushels of Potatoes; and another acre, similarly manured with thirty bushels of soot and eight bushels of common salt, produced 240 bushels.

The grass of *lawns* dressed in April, by sowing over them in rainy weather one bushel of soot to every seven square rods, we have seen increased in closeness and fineness of growth. But we think soot too valuable to be employed for that purpose.

Liquid-manure made of soot and water has been found by Mr. Barnes, and other gardeners, an excellent mode of employing it. One writer says—"My manure is soot mixed with water, in the proportion of one table-spoonful of soot to a quart of water, for *plants in pots*; but, for *Asparagus, Peas, &c.*, I use six quarts of soot to a hogshead of water. It must never be applied to plants whilst they are in a state of rest. It succeeds admirably with bulbs, and has benefited every plant to which I have applied it."

Pine-apples are manured with soot, and most beneficially, by Mr. Fleming, at Trentham Hall; Mr. Barnes, at Bicton; and Mr. Alexander, at Carlton Gardens.

Carrots are much benefited by soot; for, if well mixed with the soil, it not only increases their size, but protects them from the carrot grub. The late Mr. G. Sinclair, gardener to the Duke of Bedford, found that an unmanured soil, which produced only twenty-three tons of Carrots per acre, produced forty tons when manured with $6\frac{1}{2}$ bushels of soot, mixed with $6\frac{1}{2}$ bushels of salt.

Onions are benefited by the application of soot, more, perhaps, than by any other manure. At the time of sowing, sprinkle soot thickly along the bottom of the drill, and stir it gently in with the corner of the hoe before putting in the seed. It will improve the growth of the Onions, and save them from the grub of the Onion fly. After losing the plants of three sowings from the attacks of this pest, Mr. Mosely, of Rolleston Hall, at length put it to flight by watering the bed with the following mixture:—Twenty gallons of rain water, one peck of lime in lumps, half-a-peck of soot, two gallons of urine, one pound of soft soap, and one pound of flowers of sulphur. This mixture was poured upon

the bed so soon as it had settled sufficiently to pass through the rose of a watering-pot.

Garlic and *Shallots*, when planted, should have only the root ends of their bulbs just buried in the soil; and, at the spot where each is thus put in, about a dessert-spoonful of soot should be sprinkled previously. This saves them from the attack of the grub, as well as from the decay to which they are subject.

Quantity per Acre.—Twenty bushels per acre is the smallest quantity that can be applied alone with much benefit, and twice that quantity is still more advantageous. The best time for applying it is at the time of sowing or planting a crop; or by pointing it in about the roots of plants in the spring, when they begin to grow.

On *Wheat, Oats, Barley*, and *Grass*, we have seen it applied with marvellous benefit in April, during rainy weather. In Essex, we have continually seen the chimney-sweeper sowing it over those crops at the rate of from twelve to thirty bushels per acre. The leaves of the plants thus treated speedily become of a darker green than the leaves of the plants which have not been sooted, and the weight of crop at harvest time has been proportionately superior.

The reason for applying the soot during rainy weather is, that the ammoniacal salts contained by it are then immediately washed into the soil, instead of being evaporated by exposure to the sun and the air. We prefer applying it to crops when growing rather than with the seed, because there is no doubt that all ammoniacal compounds—even when in the form of Guano and other dungs—are taken in and digested more effectively by plants of advanced growth, than by plants just arising from their parent seeds.

Neglected as soot is in many localities, yet it is in sufficient demand in some places to render adulteration sufficiently remunerative to induce its practice. Finely-sifted coal-ashes and charred saw-dust are the foreign and comparatively worthless substances used for this fraudulent mixing.

WE were not wrong in our warning that we were not safe from the *Potato Murrain*, although July closed without its appearance to any extent. We founded our warning on the fact that vegetation is a month later than usual, and we now learn from Ireland, and elsewhere, that the rains at the close of July caused the appearance of the disease. We have seen its symptoms in the leaves in low-lying soils, and under trees in Hampshire, but the only serious visitation is in the moist-climated county of Cornwall. A correspondent, writing from Penzance on the 8th of August, says—"I must confirm all I said about the Potato disease; the haulm is literally charred away, and a large portion of the miniature tubers rotting away beneath. The Melons in this neighbourhood have also cankered off both in the stem and fruit, though Cucumbers close adjoining have not suffered."

At the Meeting of the British Pomological Society, held on the 6th inst., of which we gave a report in our last number, the following gentlemen were elected members of the Society:—

M. J. DE JONGHE, Brussels.

Mr. W. ROLLESSON, Tooting, Surrey.

Mr. BUSBY, Stockwood Park, near Luton.

Mr. OLDROYD, Nurseryman, Shrewsbury.

JAMES SILVER, Esq., Addison Road South, Kensington.

JOHN ELLIOT, Esq., Tresillian, Kingsbridge, Devon.

Rev. ADAM FITCH, Thornton Steward, Bedale.

DEATH OF MRS. LAWRENCE.—We regret having to announce that this lady, so well-known as an exhibitor of first-rate plants, died on the 14th instant, at her residence, Ealing Park.

VEGETABLE DISEASES AND AILMENTS.

PERHAPS I may be excused by my coadjutors, who write such good things about vegetables, for offering my experience on this head. I have, for thirty-five years, paid as close attention to kitchen-gardening as most men, and I feel in a position to offer practical advice. In these things, the man of long experience frequently holds much sounder views of such matters than a person of much higher talents, whose inferences or conclusions are deduced from a mere experiment or two. We old spademen have so often broken down, when we thought we were all right, that we are at once apt to draw inferences, and to receive testimonies with jealousy, sometimes, doubtless, to an unnecessary degree.

CANKER IN PARSLEY.—Whatever may be the immediate cause of that destruction of the outer skin of the root, which frequently shows itself in a sort of copper-coloured decay, I am assured that poverty of soil will induce it. But I do not mean simply a lack of manure, but exhausted old garden soils, which although, perhaps, rich in humus, or the remains of former crops, yet lack some necessary constituents of which the soil has been deprived; in fact, inorganic matters. I feel, from a multiplicity of past facts, there can be little doubt that the only radical cure for most vegetable evils, in old kitchen-gardens, is very deep digging. Nothing agrees better with Parsley in land of this character than half-burnt weeds and rubbish; or shall we call it charred? I have been much troubled, in by-gone years, with this Parsley canker; and about half-a-dozen years since, I commenced trenching for this, in addition to some other crops, when the change was extraordinary. I would recommend those who are troubled with this disease to do the same, bringing up a portion of the subsoil, unless a rank clay or a gravel. Such a proceeding should take place in November, and the ground should lay in ridge until March, when, seeking a dry time, I would have the ridges thrown down, the ground manured, and then dug rather shallow, say seven inches. As soon as eligible, I would draw deep drills, regular Pea drills, and then, by hand, introduce my charred weeds and rubbish, filling the drills three-parts full; then, passing the foot down them to make the soil true, I would sow my Parsley on the prepared soil. This plan I have practised more than once, in fact, when I could find time, and last winter it answered but too well; the Parsley was what is called by farmers "winter proud," and suffered more severely than other Parsley worse treated.

THE CLUB IN CABBAGEWORTS.—Here, again, we have another awkward customer in gardens, one which has puzzled, and continues to puzzle, thousands. Half-a-score years since, I could scarcely produce a plant of

any of the Brocolis without clubs, but in later years we scarcely meet with it, or if it exist, it has become so unimportant as to give little concern. Deep trenching, again, is, I conceive, the chief agent in getting rid of it. But I use a considerable amount of the charred rubbish before alluded to, in addition, in dressing both seed beds and the planting-out plots, and at planting-out time the roots are all dipped in a puddle, composed of cow-dung, soot, and strong maiden loam, to which we have occasionally added lime rubbish. A hole is dug close to the seed-bed at planting time, one which will hold about half-a-bushel; this hole is filled half full of cow-dung, to which is added a few spadefuls of the loam, and about two quarts of soot; the whole is then well stirred into a thorough puddle, and in the act some of the mere soil from the bottom and sides of the hole become blended with it. The roots are dipped as they are drawn, in bunches, and placed by handfuls in baskets, from whence they are taken in like manner. This puddle adheres to them in complete balls, and I have no doubt the smell of the soot is retained in the vicinity of the roots for many weeks after planting.

THE GREEN FLY ON YOUNG BEETS AND OTHER CROPS.—Of all the puzzlers, this is one of the worst. I have known Beets, Parsnips, Carrots, Sea-kale, &c., so punished, when just emerging from the seed-leaf, or even when nearly full grown, as to baffle the most earnest cultivator. Indeed, since tobacco is the only efficient thing at present known wherewith to stay the ravages of this minute, but multitudinous pest, it may well puzzle, for who can afford to purchase such quantities as would be necessary.

In these, as in many other cases, all depends on an early detection of the marauders; it is no difficult matter to destroy them when their attack commences. One pound of strong shag tobacco will go a long way, made into four gallons of liquor, providing the operator has been used to handling the syringe. The crops before named are generally attacked when about a couple of inches in height, and in a short period, if unmolested, the leaves of young Carrots and other plants so curl as to render it almost impossible to reach the rogues.

It is strange enough, that when insects attack any given plant they seem to possess the power of causing the leaves to curl, or become a kind of sac; and thus they at once provide a refuge from the sunshine and storm, and are in a tolerably safe position as to the destroyer.

Last year I had a singularly strong plant of the *Heracleum giganteum*, about which I was exceedingly anxious, as I had been at the pains of doing all I could to excite the plant to the boldest development possible. I had it mulched round six inches deep with rotten manure, and in addition, once or twice gave it during dry weather a soaking of manure-water. But it was all in vain; it became all of a sudden infested with Aphides, and both my hopes, and the monstrous herb, were, for the present, blighted. The foliage of this plant soon attained a kind of collapsed condition, and although I applied tobacco-water, it was all in vain. This year, however, it has been in all its glory; and I name the affair here, to remark, that I was at first surprised at the fly flourishing so rapidly on this umbelliferous plant, the whole order of which are understood, I believe, to be more or less of what the world calls poisonous; but there was little occasion for surprise, had I considered the case of the Carrots and Parsnips just alluded to, both of which belong to the same order.

BOLTING OR RUNNING TO SEED.—Most vegetables are liable to this, and although neither strictly a disease nor an ailment, it is at times exceedingly inconvenient. It is apt to puzzle some unpractised persons, but it is, in truth, simple enough, and I cannot better illustrate the matter in few words, than by showing how to produce this character at will. Do you want your Celery to

"bolt?" Then sow it in rich soil, prick it out in richer still, and let it remain in the "pricked" out bed until it is half grown. Chose a dry period for planting it out finally; trim the roots according to long established usage, and leave the foliage totally untrimmed; afterwards, be not solicitous about water-pots, and if the plants are not given to bolting, I am certainly no conjuror.

This is, indeed, the history of most of our cases of vegetables going to seed, or "running" prematurely; and I may point to Cauliflowers, to summer Lettuces, to Spinach, and, indeed, other things, as acting similarly with the Celery.

THE MILDEW.—How seldom do we find our common Turnips mildew, as compared with the Swede; and why? The common Turnips are, in the main, annuals; the Swede a biennial. If the common kinds attain a condition which might predispose to mildew, the probability is that they will bolt or run before they will mildew; at least, such is my impression. If I were called on to prepare a soil which would naturally predispose a Swede to bolting, I would select a soil poor in regard of organic manner, manure it heavily, and plough it not more than five inches in depth. Under such conditions, the plants would grow more rapidly the first six weeks than those on deeper ploughed and less manured land; but like the hare and the tortoise, in the fable, the probability is, that the deep-ploughed land would overtake the rich and shallow-ploughed, and the first run of dry weather in August would put them to the test. After forming a gross and rapid plant, that growth would be as suddenly checked, and mildew would occur.

The same with the garden Peas; to induce mildew, let a plot of land which has been hard cropped be highly manured and dug shallow, say six inches; let the Peas be sown very thickly, and I shall be surprised if they do not become heavily mildewed.

I need hardly observe here, that the converse of these proceedings should lead to other results; indeed, all first-rate practice points to the fact. On some other occasion I will endeavour to return to this subject.

R. ERRINGTON.

METALLIC BASE OF CLAY—ALUMINIUM.—The last novelty at the Polytechnic Institution is the last discovery in the mineral kingdom, viz., a bar of the metal *Aluminium*. This valuable and interesting specimen of the metal has been received by Mr. Pepper, as a present from the Emperor of the French, in whose private laboratory in Paris it had been obtained by the skilful manipulation of M. H. Saint Claire Deville. The metal *Aluminium* was first discovered by Sir Humphrey Davy in 1808, but the labours of scientific men since that period produced only small grains of the metal, too insignificant to afford correct information of the value and properties of the metal. Subsequently Ørsted endeavoured to exhibit the metal in a detached form, by the employment of chloride of *Aluminium*; and about thirty years since Wohler, more successfully availing himself of the plan pursued by Ørsted, succeeded in obtaining a few grains of the metal. At the Museum of Economic Geology, in Jermyn-street, Dr. Percy laboured strenuously in endeavouring to obtain the metal in appreciable quantities from cryolite, a mineral which exists in considerable quantities in Greenland; but the practical results fell considerably short of the theoretical amount. It has been reserved for M. St. Claire Deville to obtain *Aluminium* in such a quantity as to be enabled to give to the world some of the qualities and peculiarities of this extraordinary metal.

The specific gravity of *Aluminium* is about the same as that which has been ascribed to it in the usual tables

given in chemical works, viz., 2.56, or about $2\frac{1}{2}$ times heavier than water. Its colour is between that of silver and zinc. *Aluminium* is malleable and ductile almost without limit; may be beaten into the thinnest possible plate, or drawn out into the most attenuated of wire. When passed through the fingers, it exhales a slight odour, somewhat similar to that of iron. It conducts electricity in the most perfect manner, and is expected to prove a much better conductor of that fluid than any metal at present known. It melts at a temperature somewhat higher than that of zinc, to which metal, in this respect, it approaches closer than silver. *Aluminium* exists in a metallic state in almost every description of clay earths; and rubies, sapphires, and topazes, are but crystallised compounds of the metal. Mr. Pepper, in the course of his very entertaining lecture, exhibited a collection of these precious stones, which had been kindly lent to him by Messrs. Hunt and Roskell, of the value of upwards of £5,000, and which, shown under the intense light of the oxyhydrogen microscope, glittered with most extraordinary brilliancy. The first use to which the metal has been applied has been the striking of some medals similar to the five-franc pieces of France, and also some delicately formed watch-wheels, which have been presented by the Emperor to her Majesty and Prince Albert, and the principal crowned heads of Europe.

In order (says the *Post*) to become impressed with the train of sensations we desire to create in reference to this metal *Aluminium*, let the reader, with the object of localising his ideas, go to the nearest wall and pull out a brick; he will, except he happen to be chemically educated, require some amount of faith to be brought to believe that somewhat about one-third of that brick, by weight, consists of a beautiful metal—a metal that seems to be endowed with every property rendering it adapted for many of the elegancies and most of the utilities of life—a metal resplendently white as the most beautiful silver, and superior to silver in being unalterable by the sulphurous vapours which pervade the air of the streets of our cities and the chambers of our homes—a metal which can be fused with scarcely greater difficulty than zinc; which can be beaten into plates, drawn into wire, made into vessels plain and ornamental; which has all the sonorous qualities of the most expensive bronzes; and which, being not quite three times heavier than water, is admirably adapted for the manufacture of defensive armour—to such an extent, indeed, that we hear it is in contemplation to apply it to this very purpose in the instance of the Imperial cent gardes.

In giving this popular account of the new metal we have but inadequately conveyed a notion of the merits of M. St. Claire Deville, the talented philosopher to whom the discovery is due. Not only in the direct discovery of *Aluminium*, but in various collateral matters associated with that discovery does he stand prominently forth as worthy of the century in which he lives, and the enlightened potentate under whose fostering aid he has achieved his wonderful result. Before M. St. Claire Deville could produce the metal *Aluminium*, it was necessary that he should be able to produce, in large quantities, and at a moderate cost, another curious metal, concerning which the public is but little acquainted—the metal *Sodium*. M. St. Claire Deville produces *Sodium* from carbonate of soda with about the same facility that zinc is obtained from its ores. Independently of the philosophic interest attached to the manufacture of *Aluminium*, it is scarcely possible to overrate the practical advantages to be derived from that metal when it shall become an article of commerce. Already a company, we hear, is speculating on the possibility of employing it as a coating for mirror glasses; and a maker of delicate scale-beams threatens to discard brass and palladium altogether in favour of

the metal whose extreme lightness and incapability of being tarnished renders it so much better adapted to his wants. The most curious part of the tale has now to be told. The source of Aluminium is inexhaustible, clay being one of the most common materials known. Strange things come to pass. Who could have thought that a vulgar brick-field would some day rival the shining nuggets of Geelong and San Francisco?—*Lloyd's Weekly Paper.*

SOWING FLOWER SEEDS.

SEEDS of many kinds of hardy plants may be sown before the end of August, or early in September, particularly the best kinds of annuals, to flower from the end of April till the bedding-plants are established, a practice which is not so generally in use as it deserves to be, and the want of which leaves us so bare at the end of spring in the flower-garden, and also in the greenhouse. If you had seen how gay the large Conservatory in the garden of the Horticultural Society had been last May with choice annuals, you would never do, as most people are in the habit of doing, neglect to sow a proper selection of hardy annuals at the proper time.

There was one kind of annual in this large house which I could not make out from the outside, although there might be a couple of dozen of it in different parts of the house. A flat, dwarf, white, *Lychnis*-like plant, and not a leaf to be seen with the mass of flowers. What could it be? A bedding-plant of the very best character, and as hardy as the Daisy. It was the white variety of *Silene pendula*. A recent addition to our stock, whose history escaped my notice. I sowed a packet of this useful plant the day before yesterday, and when the seedlings are fit to handle, I shall transplant them, and allow every plant four inches every way, so that I may have compact little plants for potting early next March, and some to flower behind my Crocuses and Mimuluses, two of the best spring flowers we have, and some to give away. Those that will be potted, shall be potted up for my own conservatory, in case I may have one by that time; at all events, I shall try to have them as good as the Horticultural Society had them last May. There is one thing much against me in my attempts at rearing winter annuals, so to speak, all my ground has been trenched four feet deep, and everything grows so luxuriantly with me that the frost takes them off in February, after all my care. The right kind of place for such things is a dry, cold, open situation, where the soil is old and powdery, and where no leaves are apt to collect in the autumn. It might face any way except the midday sun, and have no more preparation than self-sown seeds usually require, that is, the surface to be just loosened with the hoe and no more. When we prepare a border for Geranium cuttings, we do it with an old stumpy fork or spade, going down two inches only, all below that should be rather firm. Now, half that depth would be sufficient in the autumn for all the flower-seeds I know of. I would sow all kinds of flower-seeds rather thick at this season, and take all chances. If the autumn happens to hold out long and favourable, and cause the seedlings to grow too much, and crowd each other, what is easier than to thin them, and when a bed, or row, or patch of them is thinned, that would be an excellent opportunity to scatter a lot of dry, poor mould, or sand, or ashes among them, to fill up the surface again, and keep them tidy for the winter. When there is a long continuance of dry, frosty winds, without snow, a lot of Pea-sticks should be laid over the seed-plots, but to be taken off every time the weather turns mild; if it was a very wet, foggy time, and the soil looked sour-like, or very much

soddened, and frost came on the heels of that, it would destroy almost any seedlings. Wheat or barley would suffer from the same cause; but on a small scale, there is a remedy for garden seeds under such disadvantage; an off-hand kind of draining, which seldom fails:—take the handle of a hoe, or rake, or a sharp-pointed stick, which is better, and make deep holes all over and near to the seed-beds, taking care not to hurt the seedlings, and after a week or ten days, or the next change to fair weather, these holes should be filled up level, and nothing is better for that than fine-sifted coal-ashes. This is only a larger edition of the very common, and very useful way of managing seed-pots of *Calceolarias*, *Lobelias*, and such-like, during long winter, or bad, foggy weather, only that clean sand is used for filling the holes made in seedling-pots.

Now, with the most ordinary attention, I cannot see why the smallest cottager in the kingdom should not rear winter annuals as well as the Duke of any place, and I am quite sure that nothing can be more handy in the spring than to have plenty of plants of some kind or other. I never knew a man who had too many border flowers in the spring; and then, see how well many of them will do in a greenhouse, as Mr. Fish has often told us; but it is astonishing to find the difference between being told and seeing a thing with one's own eyes. After all my own experience, I was quite struck with the effect of the large masses of annuals which made up the best part of the show in the said Conservatory, but many of the plants were kept in pots, and in shelter, all through the winter, by first-rate gardeners; a plan which few can follow, of those for whom all this is being told; still, if the plants from my telling could be only half as good-looking as those I allude to, there would be little reason for complaining. I would not recommend to a new beginner, nor to any one except a professed hand, to sow even *Mignonette* in pots to keep over the winter, but all the annuals that I shall name to day, and almost all the hardy annuals that will stand over the winter, may be taken up in March, or as late as the beginning of April, to be potted in rich, light mould, to flower anywhere in-doors.

When the *Collinsias* and *Gillias* came out first, I recollect that most people flowered them in pots for a few years. I have even seen them at public shows competing for prizes. I have had *Collinsia bicolor* in bloom myself as early as the middle of April, and much finer than I ever saw it out-of-doors; but there were far better than mine to be seen in those days. I once saw two match plants of *Schizanthus pinnatus*, nine feet high, and clothed to the pots; it was in 1828, and at a place on the south side of Edinburgh, and I am almost sure that a five guinea medal could not produce two such plants, at the present day, under three years; that is, until some one had learned the mode on purpose to win the medal. No one out of fifty could grow Air plants in those days, and the generation who have learned to grow Air plants to such wonderful perfection, can hardly grow a common annual in a pot fit to be seen, so that if the present race of gardeners do wonders, it is really wonderful how much good gardening has been all but forgotten during this great revolution in gardening, and I am not at all surprised at being now asked—"How and when should the red and white Candytuft be sown, so as to have it blooming in pots in the spring?" or, "If there should be any other sort of annual to recommend for a similar purpose, you would greatly oblige, &c., &c."

Perhaps I have done as much with annuals as any man of my time, and I know, that to grow them well is more than the bulk of gardeners can accomplish, and for this reason, that they have not sufficient room for them, in the first place; nor time enough to spare from other things, to attend to them properly; and the consequence is that they are neglected; but that is no

reason against them, it is only a misfortune, and unfortunate, because there is not a man alive who knows what might be made of annuals, if a whole generation was engaged in their cultivation and in improving their breeds. They are the poor man's plants, and the plants for those with very little room. I could grow and bloom fifty kinds of them myself, every year of my life, although I have not room for a tithe of the plants that are pressed on me every month of the summer; for I never allow annuals to "take up an inch of room," if you can understand how that can be, or if you forget how I used to do it.

I never yet saw a flower border of mixed plants, in August or September, on which you could not sow as many annuals, without hurting a single plant, as would cover a border four times the size, if they were all transplanted out to try; then, supposing you have no better place, the sooner you sow your annuals the better, as they must be transplanted in October, like so many Lettuces; and if you sow too late, you must transplant in the same degree, and be too late to do any good with them; but when they can remain undisturbed, it will be time enough to sow them by the beginning of September, as in all likelihood those who intend doing so have most of the sorts already self-sown where they bloomed this season. It is singular, but quite true, that, with all our skill, we cannot rear such healthy plants as those which come from self-sown seeds; therefore, people ought to be more cautious how they clean and stir flower-borders in the autumn. I would now allow a scratch where I expected a seed to rise, from this day to Michaelmas; if weeds come there, pull them as gently as you would a gray hair out of a wig, and no more hoeing and raking till you see what crop of seedlings you are likely to have this year, or rather for next year; then, towards the end of the season, when the borders must be "cleared," take a spade, and lift as many as you want, with a thin slice of the top soil, and carry each turn to a place which is already cleared and free from plants, and lay them down like so many pieces of turf, giving them a little patting, here and there, to settle them properly. After that fill in between the edges of the pieces with clean soil, and give a gentle watering, to settle the whole in such a manner that a stranger to the place could not perceive on the morrow but that they had come up in that very place.

The very same process might be gone through with seeds which are sown by hand. So you see there is really no difficulty at all; and I am persuaded that half the deaths by frost and bad winters are more the result of inattention to small matters, than to the delicate nature of the plants themselves. It often happens that lots of annual seedlings only begin to appear above ground in January and February; these are the safest in the long run, but who knows that they would ever come up, and if they did not, and you had to rely on such a chance, you would lose a whole season; therefore, looking at the thing from every side, I see nothing for it more safe than to sow purposely, just as you would for a bed of Onions; and next week I shall name all the best for the purpose.

D. BEATON.

DR. JOSEPH HOOKER, son of Sir W. Hooker, the Director of the Botanical Gardens at Kew, has been appointed by Government to the charge of the Herbarium, Library, and strictly botanical part of that establishment. Such an officer has been greatly needed since the extensive additions made to the collection by Mr. Bentham. His appointment is simultaneous with a grant of £3000 towards the erection of a new Museum in those delightful gardens.—*Gentleman's Magazine*.

GLEANINGS FROM LUTON HOO.

In answer to several enquiries, I may state, that this beautiful place, the residence of — Leigh, Esq., is about fourteen miles from Watford, on the North Western, about an equal distance from Hatfield, and eleven miles from Hitchin, on the Great Northern, and two miles from Luton. An omnibus goes from Watford to Luton, passing through St. Alban's, twice a day, meeting the 9 A.M. and 5 P.M. trains from London, and passes the lodge gates, which are some ten minutes walk from the gardens and mansion. The omnibus from Hatfield meets the 5 P.M. train from London, and passes within a short distance of another lodge; but, unless in a long summer's day, it would be too late to see the place. There is no regular conveyance from Hitchin to Luton. In coming from the north, Leighton would be the best station to stop at. About 10 A.M., and 7 P.M., there is a branch train to Dunstable, and from thence an omnibus to Luton. I have previously mentioned that Stockwood Park, now so celebrated for the Golden Hamburg Grape, is less than a mile from Luton.

The princely mansion of Luton Hoo was commenced, I believe, under the auspices of the first Lord Bute, the preceptor, the first Secretary of State, and then the Prime Minister of George the Third. The eastern wing of the mansion was completed by the late Marquis some fifteen years ago. A few years afterwards, the centre of the building and the eastern wing were completely gutted by a calamitous fire. Before this event, besides the regular massiveness of the huge architectural pile, the mansion was distinguished for two things—a very large collection of books, containing many rare literary works, and a large assortment of paintings by old masters, collected chiefly by the premier Earl, all of which escaped destruction. After the estate had been held for a short time by — Ward, Esq., it came into the possession of the present owner, who has reconstructed what was little better than a shell of bare walls, and has furnished and decorated the rooms in a style uniting a combination of comfort, magnificence, and refined taste. The same liberal expenditure, as was some time ago indicated, is at once observable in the great improvements effected in the pleasure grounds and gardens.

The mansion stands upon an elevated plateau, giving it a commanding appearance from whatever entrance in the park it is approached. Besides the entrances on the St. Alban's and Luton, and the Hatfield and Luton roads, there is a third on the latter road, at the termination of Park Street, Luton; and by that entrance I should advise connoisseurs in park scenery either to enter or leave. Although I have little more reliable authority than gardening gossip to depend upon, there are traces in the park itself that Mr. Brown, the great landscape gardener of the times, had been employed by Lord Bute to lay out the place. With a mixture of satire and truth, Mr. Price stated something to the effect, that Mr. Brown always left his characteristic traits behind him, in a piece of water, circular or oval groups of trees, and a narrow belt bounding the demesne. Time and alterations have mellowed these traces, though a person looking for them might think he could find them, and most likely they were considerably modified from the first, by the advice of Peter Collinson, to whose energy and patronage we are chiefly indebted for the introduction of trees and shrubs, during the middle part of the eighteenth century. It could hardly be otherwise but that a friendly feeling would exist between Brown and Collinson, and there is good reason for believing that the latter was on intimate terms with Lord Bute. I have several times been told of a characteristic

request and answer made and granted something in this way. Peter wrote to his Lordship—

"If a hare should chance to stray,
Ticket its feet and send it this way."

To which his Lordship replied—

"A hare I have found, and ticketed its feet
To Peter Collinson of Gracechurch Street."

Between the house and the kitchen-garden, behind the stables, is a wood, now interspersed with walks grown over, and many of which have been renewed, and beautiful and shady they are. In this wood there are traces of an old botanical arrangement—great quantities of spring-flowers by the sides of the walks; very fine specimens of several kinds of timber, chiefly Cedars of Lebanon, proving that something towards a hundred years ago this wood consisted of a beautiful flower-garden and shrubbery;—such a place as Collinson would like to retreat to, and compare and contrast with his own snug little villa, at Mill Hill, near Hendon.

I have seldom glanced at some rare specimens of trees especially associated with Collinson, such as at Wanstead, Ham House, the Bishop's Palace at Fulham, his own residence at Mill Hill, where, some years ago, shrubs and trees looked upon as commemorative were carefully preserved by the proprietors of the educational establishment, who were then the possessors, or even at the little flowers and majestic timber in the wood at Luton Hoo, without thinking of the softening and civilising influence exercised by the quaker linen-draper, not only in his own, but in all future times; and feeling thoroughly convinced of what he himself said, "that his plants and garden furnished him with a great source of happiness," and "that every living thing called forth his affections."

The piece of water is formed by damming back the waters of the Lea, which rises a little above Luton, and which lends such beauty to the grounds at Brockett Hall, and the vineyard at Hatfield House. Like all such waters, it has become weedy and sedgy by neglect, and, from its size, the cleansing of it will be a serious matter. Experience seems to show that such material is, from its stringency, of but little use, even as a dressing for grass land, when used by itself, but becomes a valuable fertiliser when mellowed by a mixture of lime, or even of fresh manure that would cause it to ferment. In most of this district there is no great difficulty in getting abundance of chalk, which merely requires fuel to convert it into lime. Expensive as the cleanings out of such pieces of water may be, if the material can be rendered ultimately profitable, the expense will not be all loss.

I am not sufficiently informed as to the time of commencing the mansion and forming this fine piece of water, but would imagine that if the house were to be built now, it would be placed some hundreds of yards farther to the south, as then the water would be seen from the ground-level as well as the first-floor windows. At present, standing in front of the mansion, you glance over the valley, and rest the eye on the woodland and upland scenery beyond, the views within and beyond the park being very undulated and diversified. Mr. Fraser once stated, that if it were desirable to bring a view of the water within sight of a spectator at the base of the building, nothing would be required but taking off the brow of the intercepting plateau; and, considering the celerity and skill with which great quantities of earth were moved, to give graceful and easy undulations to the extensive lawn, the lowering of such an intercepting plateau would be no great matter if ever it should be deemed desirable.

With the exception of thus improving the lawn, especially to the westward of the mansion, there is little difference in the front view of the house from what it presented in the time of the late Marquis, standing now,

as it did then, in solitary grandeur, with its broad, unbroken carpet of green turf to the south and the west. The west lawn terminates in a sloping valley, and here, at present, is the boundary of the pleasure-ground. The ground rises on the opposite bank, now forming part of the park, until crossing the road that comes from the new mill and lodge on the Hatfield and Luton road, you enter the wilderness wood of the late botanic garden; the elegant stables being placed at the north side of it, and the kitchen-gardens on the east and north.

Along the bottom and the sloping banks of this valley, not sufficiently high, however, to bring the view of them within sight of the ground-floor of the mansion, have been placed the American pleasure-grounds and flower-gardens. A few trees have been removed, which, at various turns, present fine peeps of the sheet of water. Were it desirable, there is no end to the beauty and interest that might be centered in this valley, by winding, shady walks, grottoes, rooteries, ferneries, &c., extending even to the verge of the water. Mr. Fraser has commenced a collection of hardy Ferns, and no one knows better how to manage them. In a woodland corner of the lawn, a nice effect has been produced by planting large quantities of the common Fern, and before they come fully into leaf the ground is carpeted with a profusion of Crocus and other bulbs, Primroses, Polyanthuses, &c. The great attraction for me, however, has been the valley walk, containing fine groups of the best American and other shrubs, a splendid collection of Roses, and a large flower-garden on the grouping system.

It is in this valley that the American plants are doing so well in a marly clay, with but little pretensions to the name of loam, as was mentioned some time ago. The White Chinese Azalea has proved itself, even during the last winter, hardier than a Laurestinus. Many of the newer and better kinds of Rhododendrons that had their points much injured are breaking freely from the wood lower down. The flower-garden is placed to the south of the American grounds, along the sloping bank of the lawn, terminating in the bottom of the valley. The walk that bounds it from the lawn on the east side, and the garden itself, will be unseen from the mansion, unless from the higher windows. The object, no doubt, has been to prevent such a thing as a group of flowers, or small shrubs, from coming in contact, or comparison, with the massive grandeur of the mansion. A group of evergreens, on the east side of the flower-garden, would not only accomplish this more effectually, by concealing the flowers on that side before the gardens were entered, but would lend an additional charm to the bright colours of the beds, splendid as they are just now, by applying a nice back ground when the garden was looked upon from the walk in the valley, or from the rising ground in the park beyond. With the exception of some smaller parts, such as a group of thistle-form figures proceeding from a common centre, and the corresponding parts of which were filled with one similar colour, the most of the beds of the large, regular group are long rather than wide in their dimensions, and these were all filled, each with two contrasting colours. A wide belt, consisting of two rows generally for an edging, with a contrasting colour for the centre part of the bed. Great taste has been shown, not only in thus planting of each bed, but in arranging the neighbouring beds so as to be contrasts and diversified shades to each other. From the beds being large, and somewhat long in shape, it struck me that a much more striking effect was produced than if each of the beds had been of one colour. For this, and a flower-garden in front of the houses, a great quantity of plants are used; and to free the pits and houses early in spring, Mr. Fraser turns out his plants

into sandy leaf-mould, in earth pits, formed as you would make a wide Celery trench, and protects them with common hurdles thatched with straw.

Beautiful as this flower-garden is—and valid, no doubt, as were the reasons for keeping it out of sight of the mansion—I have always felt a little disappointment about it, just because it is not in the position in which I thought it should be placed. I recollect one evening, after visiting Luton Hoo, shortly after the improvements were commenced,—I hardly know whether I was really asleep, or only in a dreamy, imaginative mood; but I was standing on the wide terrace on the south front of the mansion, and looking down upon a beautiful Italian garden; the flower-beds glowing in the sunshine, divided from each other by green carpets of grass and walks of bright gravel; space and elevation given by standard Orange-trees and Portugal Laurels trained to match, and ornamented with statues and vases, and mellowed and softened down by the jets and cool trickle of fountains of water, supplied by the water seen at the cascade of the river below. As a man may become a great owner of castles in the air without infringing upon any man's ground, so I may revel, at times, in this imaginative scene, without calling in question the reasons that dictated a different course. One comfort remains, that this fairy vision may, after all, some day be realised, as nothing that has been done would at all interfere with its being carried out, if the tastes and resources of the proprietor should at any time, however remote, so determine.

At present, the chief access to the kitchen-garden from the house is along the carriage-road, past the stables, which brings you in on the north side of the garden, facing the sheds, &c., at the back of the hothouses. All well enough for common visitors; but unsuitable for house company, who ought to have the best scene of the garden as they enter. This is secured by the walk through the wood, which terminates on the east side of the kitchen-garden, and another finishing at the middle of the south side. These walks are terminated on the east side by the New Mill end approach, and separated from the pleasure-ground by the rising ground on the west of the pleasure-ground valley. Any amount of that *bræe*, and the level ground between the pleasure-ground and the wilderness-wood, might be taken in as ornamental-ground with propriety. It would be a great improvement to take in as much at the north side as would connect the wood and pleasure-ground together, and thus, as it were, form a connecting link between the mansion and the kitchen-garden. Such a walk might be thoroughly private, with the exception of crossing the approach. Even this could be avoided by driving a tunnel underneath it, which might be made very ornamental, if desirable; while the entrance on each side would furnish rare homes for *Alpines*, *Ferns*, and such trailing plants as the lesser *Vincas* and *Helianthemons*. This would connect, without any obtrusive or unwelcome break, the mansion, pleasure-grounds, and kitchen-garden; all the more necessary for securing privacy and seclusion, when, as in this instance, the ladies must go to the kitchen-garden to see all the finer hothouse and greenhouse-plants.

I have unwittingly lengthened these remarks, and have little room for other matters I intended mentioning. I have some hopes they may be interesting to many who have visited these gardens, and may afford a theme for thought and discussion to those young gardeners that intend going. Whether any of the ideas thrown out should ever be carried out is altogether another affair, and the mere printing of them can do no harm. I shall now confine myself to a few points.

The kitchen-garden is bounded by walls, as far as I recollect, in the shape of an octagon, comprising, outside and inside, about seven acres; the new range of

houses being placed on the north-west side. The vast quantity of lime-rubbish and broken bricks that had to be removed from the mansion furnished Mr. Fraser with a rare opportunity of draining and improving the soil; and splendid crops are now produced, in what a few years ago was an exhausted garden. The shape of the garden furnishes many aspects, outside and inside, for fruit trees, all of which are doing well. The garden is divided by a wall across the centre; the south side appropriated to Peaches, and the north to Cherries; and, though planted only a few years, already the wall has been raised several feet, and furnished with a slate coping, to give the trees more head-room; the coping acting so far as a protector. Such a wall of beautiful symmetrical trees is not often met with. Various modes of training standard trees and pyramids round the borders have been resorted to, and all seemingly successful. A new mode (to me) of forming a table-trellis, chiefly of Cherries, is here resorted to. The branches of one tree are all trained one way, about two-and-a-half feet, or two feet, from the ground. The table will be complete when the branches of one tree extend to the bole of the next. The great advantage of this system will be the ease with which the fruit can be gathered, and protected from birds by throwing a close net over the table of fruit. The Gooseberry-trees are also trained with great nicety. Most of them have a clean stem, rather more than a foot in height, and from that point they rise and spread outwards, leaving the centre entirely open, and looking as elegant as a narrow based, wide, turned-over mouth of a fine vase. For effecting this object, Mr. Fraser uses a stout ring of wire, something in the Gardnerian style, the branches supporting the ring, and the ring the branches. The bushes were loaded with fine fruit. I also noticed what was to me a

NEW MODE OF GRAFTING TREES AGAINST A WALL.

The object is to secure strength to the scions, and leave the bulk of the tree untouched until the scions had made vigorous growth to take the place of the branches to be removed. Those operated upon were Pears, and the system answered well. The trees had chiefly been trained in the fan method. The centre shoot was generally selected, deprived of all side-shoots and spurs; and then, at the proper time in spring, when the bark parts from the wood, slits were made in the bark on each side of this shoot, and bound up in the usual way. The shoots formed were trained horizontally. By-and-by the lower shoots were grafted in the usual way, and the rest of the fan-trained shoots being removed, a new tree was formed at once, without ever losing a crop. Mr. Fraser has also a peculiar mode of

MAKING TALL DAHLIAS DWARFS

by layering them down. Last year, the finest white bed of Dahlias I ever saw was so formed of *Antagonist*, and though a mass of flowers, was not above eighteen inches in height. Between the eastern boundary of the garden and the wilderness wood, are two long borders filled with Dahlias. The rows next the walks are chiefly *Zelinda*, and two others behind chiefly Fancies laid down, backed by some rows of the best Dahlias. The place is rather too shady for them, and yet there were many fine flowers open on the 10th. Mr. Fraser's plan consists in growing the Dahlias pretty strong, and then taking the stem in his hand and twisting it so as to crack it a little, but not break it near the bottom. He has hardly ever had a stem snap. After this you can lay it down and move it about just as you like.

Dwarf Dahlias are now getting much into fashion. Few of them as yet satisfy a florist. For a combination of dwarf, compact masses of colour, with fine quality of

of the individual flower, this Fraserian mode is very useful. I may as well introduce here a mode of

PROPAGATING ROSES BY GRAFTING ON THE ROOTS,

which many may like to try. Mr. Fraser lately mentioned the matter to me in a note; and the other day I saw some of the Roses, nice little plants. "I forgot to show you some Roses, the last time you were here, that A. Mackenzie (the intelligent foreman) propagated in the spring, of which I knew nothing till they were in bloom. Just as the buds were swelling, he pulled up an old Rose bush, cut off some of the strongest roots and grafted them with *La Reine*, and other good sorts, potted them in small pots, leaving a couple of buds above the soil, and placed the pots in a close cold pit. All, or mostly all, are now nice flowering-plants, and the pots full of roots. I am not aware that this successful mode of propagating is at all generally practised. Every cutting of new Roses might thus be grafted, and with a better chance of success, apparently, than making cuttings. I have frequently done *Combretum purpurea* in the same way, and I know of no other way of propagating it successfully. If I may add, that I have not been so successful when grafting without giving the stocks any preparation; nurserymen generally establish their stocks in pots, before grafting the finer kinds on them. This grafting on the roots would be a nice job on a wet day in spring."

The range of houses is a very fine one, put up by Gray and Ormson, according to Mr. Fraser's plan. The centre consists of large, very wide houses; the one a plant stove, and the other a greenhouse. The two wings consist of two vineries at each end, of good width, but not so wide as the greenhouse and stove. The back wall is much higher than the houses, and the rafters, instead of going to the wall, are joined by a short-hipped roof at the back. This is of great importance for Strawberry shelves near the ridge. An additional advantage has been gained in the dark months, by having the back wall above the houses made of a light stone colour, which reflects the light. There are one or two points about these houses worthy of consideration. A path at the back runs along the whole range intercepted by plate-glass doors at the divisions. The *vista* seen from either end is very pleasing. As you pass along at either end all is perfect; the Vines are seen to the best advantage, the largest bunches being generally nearest the top. But supposing you enter the greenhouse from the eastern vineries, unless you at once turn to the left and get along the fruit, you are apt to go straight forward, with an opaque roof over your head, and the floor and underside of the stage on your left hand. This is such a contrast to the general effect of the plants on the shelves and stages, as to neutralise, in a degree, the beauty of the *vista* through the whole of the houses. Now, the stage rising regularly something to the width of the ridge of the roof, and then continued in a close platform to the back wall, the back passage being beneath it, is a scheme that could hardly be beat; the stage for housing and growing, and the platform for storing out of sight an immense number of plants. A conical-shaped roof, falling equally north and south, would be very suitable for such a house; but, independent of alterations, there would be no convenience, as now, for storing young plants out of sight, and it would be impossible to give an equal number of growing and flowering plants equal justice. Allowing it to remain as it is, the pathway would be improved by raising a bank beneath the stage, and covering it with the hardier Ferns and Mosses that delight in the shade. Something would be done by a simple barrier that arrested progress but did not intercept the view; and, perhaps, the best remedy of all

would be to close in the two ends of the stage, and place two doors at the ends of this passage with plate-glass, similar to the others, with a peculiar latch that the initiated alone could open.

Passing to the stove, a similar objection to the open *vista* does not exist. This has a broad shelf at the ends and the front, similar to the greenhouse, but there is no stage; a raised pit, heated underneath, and covered with pebbles, for the plants to stand upon, being used instead; the sky line being broken by Orchids suspended in baskets. Even here, however, Mr. Fraser has a contemplated change in his eye, which, at a mere trifle, would be a great improvement. The wall at the back is rather high for enabling the eye to see the plants freely. The proposal is to lower that wall, and build another some four or five feet in height, along the pit, and about four feet or even less from the back path. Here, as well as against the back wall, could be formed a magnificent bank of Ferns and Mosses, which would have a unity of interest and expression of themselves, while the front part of the pit could be appropriated chiefly to flowering-plants. The intersecting wall could soon be covered, as the front wall is now, with the *Ficus stipulata*.

The Vines are now in full bearing, and produce good crops. Some fine specimens of the *Black Morocco* were sent a year or two ago to Regent Street, where it was described as a *coarse* Grape. Certainly it is not to be compared to some other kinds, but it seemed to me that there was a little of the *old fox*, "hanging" what he could not get, about the matter, as few have succeeded in setting that variety so regularly, and swelling berries on large bunches to such a size.

The greenhouse is now decorated with Fuchsias, Balsams, Cockscombs, &c. Lately, it was a blaze of Pelargoniums; further back, a mass of Azaleas. In winter was decorated with Camellias, Epacris, and winter Heaths, &c. The stove, independently of tropical plants in bloom, is always interesting, from the fine specimens of Ferns, and some fine Orchid or other in flower. As specimens, allow me to mention a few of these.

FERNS.—A *Davallia elegans*, four feet high, and seven feet over. *Davallia umbrosa*, four feet high, and four feet across. *Pteris vespertilioides*, three feet high, five feet across. *Aspidium exaltatum*, nine feet high. *Polypodium trichoides*, seven feet high, twelve feet across. *Polystichum capense*, three feet high, four feet across. *Polypodium aureum*, three feet high, by four across. Large plants of *Blechnum corcovadense*, and fine specimens of *Adiantum pentadactylon*, *Adiantum trapeziforme*, *Cuneatum Pubescens*, *Moritzianum*, *Pedatus*, *Capillus-veneris*, and a huge plant of the Bird's-nest Fern.

I also noted all the fine and more delicate *Lycopodiums*, and many pretty, small Ferns, I can find no room for; but I may mention that Mr. Fraser is particularly fortunate with the Golden Fern, *Gymnogramma chrysophylla*.

Among Orchids, I lately noticed a *Cypripedium insigne*, with three dozen of fine flowers. An *Aerides odorata superba*, with thirty-three fine spikes, and on Friday, among others, there were two fine *Cattleyas*, one *Crispa*, with sixteen spikes, and many of these having seven flowers, and *Loddigesii*, with from twelve to more spikes open, and several of these with eight flowers, and few under seven. There was also a fine plant of *Vanda tricolor*, in bloom, and fine shows of large bunches from *Stanhopea oculata*.

On the west side of the garden is situated the ranges of pits, and a Cucumber-house, all heated by hot-water, used in the usual way for bedding-plants, early vegetables, and Melons.

There are many more things worth notice. I hope I have not unnecessarily intruded by these glances, as

that would be but a poor return for the pleasant and profitable hours spent at Luton Hoo. I will mention one thing more. In front of the house is a largish flower-garden on turf; it is separated from the kitchen-garden by a row of Scotch Roses, standard Roses, and Sweet Peas behind. These are not yet sufficient to intercept the view of the vegetables, and just on that account there has been something unsatisfactory in the view of this garden. A hedge of evergreens high enough would at once form a fine back-ground for the flowers, and prove a complete separating line, as we can hardly contemplate two kinds of objects successfully at the same time, without one rudely breaking in upon the other. I feel the want of this back-ground every day myself, and so do many more gardeners. Fine collections of Carnations, Picotees, Ranunculuses, &c., are grown on the borders, near the houses, and ere long few gardens will be more complete.

R. FISH.

NEGLECT OF ART AND SCIENCE.—A representation on the neglect of Art and Science in England has been sent home from the English jurors in Paris, which we sincerely trust will have its weight with Lord Palmerston. Government, it is very safe to say, has not been always alive to the importance of encouraging and sustaining those studies which utilize material wealth and place new powers in the hands of genius. This fact is written only too plainly on the walls of the Paris Exhibition. Our Art-manufactures, though improving, are still inferior to those of many continental lands. Our glass—our porcelain—our bronze work—our articles of fancy generally, are not comparable with those of Prague, Venice, Munich, and Paris. Even in departments which we once monopolized—such as scientific instruments—we are now distanced by foreign competitors. Few persons, except the jurors themselves, are aware how far and wide this inferiority extends:—and we are not surprised to find that these gentlemen, with the facts before their eyes, and anxious for the future, should have met in a body to discuss the matter; and, having discussed it, should have sent home a serious remonstrance to the Government. If the State will not look to the Art-education of the people, England must be content to see those occupations which connect themselves with the Beautiful pass away into other lands.—*Athenæum*.

THE ORANGE.

CITRUS AURANTIA.

THE culture of the Orange tribe is, in these days, excepting in a few places, almost entirely neglected. We have now so many handsome flowering plants lately introduced, and the passion for novelty is so predominant, that old and really worthy plants are almost driven out of our greenhouses to make room for the extraordinary number of new plants that science, backed by enterprise and wealth, have introduced to this country within my recollection. Yet every one, however eager after new plants, will admit that a well-grown Orange, Lemon, Citron, or Shaddock tree, is, when in fruit, as handsome an ornament to our greenhouses and conservatories as the finest exotic plant introduced in modern times.

The culture of these fine fruits for the table, in this country, is scarcely necessary, for they are imported in such quantities, and in such perfection, and, besides that, are so cheap, that it would be, I may say, carrying coals to Newcastle, to grow them for the sake of their fruit; yet it is extremely gratifying to the amateur

to have as part of the dessert on his table his own produced Oranges. That they can be grown in our greenhouses as good in quality as foreign fruit, I have, in my own experience, repeatedly proved. When I was gardener to the Rev. James Armitage Rhodes, at Horsforth Hall, there were, in a greenhouse, several large Orange-trees, which bore plentiful crops of large fruit, with skins, or rinds, as thin as possible when they were ripe, and with flesh quite tender, and full of the sweetest juice. Many a dish have I sent in to table, and the guests have not been able to distinguish the fruit from the best imported fruit they ever tasted. It is true, to bring them to this state of perfection every care was bestowed upon them. They were grown in a house with the roof entirely glazed with good glass, giving them the benefit of heat, light, air, and moisture in proper proportions; the whole of which care amounted to no more than we give to produce good Peaches or Nectarines. I give this, as an instance under my own observation and management, as a proof that good Oranges may be grown in this country, and, I have no doubt, many others have been equally successful; but independently of the pleasure of eating fruit of our own growth, there is no object of the fruit-tree kind can be richer in appearance than a large, healthy Orange-tree, with its golden-coloured fruit hanging amongst its dark green, handsome foliage. I do expect the noble trees procured from France by Sir Joseph Paxton, and placed in the Crystal Palace, will be the finest objects of the kind in the kingdom. I think they are the very best trees for such a magnificent building. In addition to the splendid fruit and fine foliage, the blossoms of the Orange tribe, though not so showy as the Camellia, are very pretty, and have the well-known property of being extremely fragrant, filling the air with their agreeable perfume.

Let not the amateur, however, consider that it is necessary to have a Crystal Palace to cultivate the Orange tribe, in order to produce their fragrant flowers and beautiful fruit. No; they may be grown well in a small greenhouse, in moderate-sized pots, for many years. The house in which I grew the trees alluded to above was only thirty feet long, sixteen feet wide, and twelve feet high at the back. The tallest trees were, of course, at the back, faced with lesser plants down to the path in front, and yet, in this comparatively small house, there were twelve plants of various sizes, in order to form a fine bank of trees; the largest had stems as thick as my arm, and had heads six feet across; so that with fewer or more trees, in proportion to the size of the house, Oranges may be grown in almost every greenhouse in England. It is true, they may be managed best if grown in a house by themselves, but the Camellia assorts well with them, and requires the same temperature; but Heaths, New Holland plants, and the large tribe classed under the name of soft-wooded plants, will not arrange well neither with the Orange nor the Camellia. Such plants should have houses apart from the Orange, though a few specimens in flower might be placed on the front platform next the front windows where the air is generally admitted into the house.

The Orange tribe will live under an opaque roof, such as may be seen at Holland House, at Kensington, belonging to Lord Holland, and also at Cliveden, near Maidenhead, the seat of the Duchess of Sutherland; but Mr. Scrobie, at the first place, and Mr. John Fleming, at the second, both good gardeners, wish most earnestly they had glass-roofed houses for the noble trees under their care.

Our summers are too short for trees so placed during our long winters to bring the fruit to perfection, even as an object of ornament solely. In fact, though many of the trees at both places are almost, if not quite, equal to

those in the Crystal Palace, I have never yet seen a respectable crop of fruit on them.

In the Royal Gardens, at Paris, there are a great number of very large Orange-trees grown in boxes and tubs. These are placed in opaque-roofed houses during winter, and that situation appears to suit such large, old trees; but then the summers in France are longer and warmer than in Britain; consequently, the fruit sets and ripens tolerably; but even there, a glass roof would be a great improvement. For though these trees, when not growing, will live with less light than others that are growing, yet, even on the continent (and much more in Britain) they suffer by the want of light in winter, as may be seen by the pale colour of their leaves, and the great number that fall off when the trees are brought out of their dark abode, and exposed to the full blaze of daylight and sunshine.

T. APPELBY.

(To be continued.)

WOOD-CRAFT.

I FEAR that proprietors of forest lands and plantations of young trees imagine that they require no attention or labour during the summer months; at least, I may venture to say, that in my various journeyings I scarcely ever see any foresters at work at this time of the year. This is a matter of surprise to me; I consider woodlands, especially such as have been planted only six or seven years, or less, require a considerable amount of attention, even now. The impression of the utility, and even economy, of a certain amount of care and labour at this season is so strong on my mind, that I have resolved to write a short essay on the subject, and to make my meaning clearly understood, I shall divide my subject into the following heads:—

1st., Pruning; 2nd, Destroying Weeds; 3rd, Fences; 4th, The Nursery; and 5th, Preparing ground for new plantations—all matters that require attention at the present time.

1st, *Pruning.* All young woods should be pruned with the knife only. This is a law that should never be broken in well-kept plantations; hence, I strongly recommend going over them at least twice a year—once now, or perhaps a month earlier, and again in the winter. An active man, with a good, strong knife, will prune ten young trees in less time than he would prune one of the same trees where the branches to be pruned off require the bill-hook or the saw; hence, it is not only better to prune the trees when young, but it is, also, a saving in labour. The wounds made with a knife will heal up in a year, whilst those made with the saw require two or three years; and besides the exposing of the wounds to the air, the injury of large wounds is, that before they are covered with new bark a large patch of dead wood is gradually enclosed in the tree, and this dead wood greatly lowers the value of the timber. This is more especially the case with trees that have two or three or more leaders. When pruning is neglected for several years, either those leaders are reduced to one, which leaves large scars on the tree, or they are left merely because they are too large to be cut off. The tree grows up then with all its leading shoots, and when it is felled the woodman exclaims, "What a pity this tree was allowed to grow with so many stems, or trunks!"

Particular attention, then, should be given, whilst the trees are young, to prune away every leading shoot, excepting one that is the most promising to form a clean, straight trunk. There is no time so fit for this particular branch of pruning as the present. This should be done now, even if the mere side-shoots are left till the winter pruning, though they may be pruned now, also, with great propriety. This

direction of cutting all superfluous leading shoots is at this season more especially desirable for coniferous trees. The ascending sap has ceased, in a great measure, to flow; and, therefore, they will not suffer by its oozing out. Very lately, I went over a young plantation of Pines and Firs, for the express purpose of cutting out extra leaders made this year, and I was glad to find that they scarcely bled out of the wounds made with the knife at all; and this is not the first time I have so pruned coniferæ at this season. I always found such wounds made now heal quicker than at any other time of the year. The descending sap is the active agent in healing and covering wounds made in pruning, and that sap always is most abundant and active in its functions (the forming of new wood) during the later months of the growing season. In winter, it ceases to descend, or, in other words, is dormant; hence, large wounds in winter are more injurious in winter than now; but more especially still in spring.

This leads me to give another golden and important rule—*Never to prune in spring*, when the ascending sap is rising. A familiar instance of the injury of late pruning is well known to every cultivator of the Vine. If the Vine is pruned severely after the ascending sap is in motion, it will flow out of the vessels divided by the knife; and if not stopped (a matter of great difficulty) the Vine will die. Now, though our forest trees, at least many of them, will not bleed, as I may call it, to such a ruinous extent, yet they will do so in a degree, especially the coniferous tribes. This is the reason for my rule of not pruning after the ascending sap begins to rise. I, therefore, strongly recommend, for reasons I have given, which, I think, are conclusive—the pruning of forest trees immediately. The days are long, hence the workman has full time at his command; and if the work will allow him to prune his trees with his knife only he will go over many hundreds of trees in one day; he will do his work comfortably, and go home satisfied that his day has been well spent. The owner may rest satisfied that his young rising woods have been pruned at the very best season, both as regards the health of the trees and the forming of them into straight, good, round timber at the least expense, and in the least possible time.

I only wish I had the direction of a tolerable large young wood, to prove the soundness of the principles of pruning during summer and autumn instead of spring.

T. APPELBY.

(To be continued.)

NOTES FROM PARIS.

BOIS DE BOULOGNE.—ST. CLOUD.

THOSE who have not seen Paris and its environs for the last three or four years can have but a faint idea of the changes and improvements which have been effected during that time. The completion and embellishments of the Louvre are the theme of every one's admiration; but for my own part, I think it is questionable if grand architectural monuments alone exercise so much influence on the character of a people as is generally supposed. If we look into the moral condition of the Greeks or Romans, whose temples and statuary still form the models of all modern artists, we shall find much room for doubt on this point. Even in great Britain, at the present day, there are certain large towns, which, for their architecture and romantic beauty, are said to rival ancient Athens itself. And yet in these very towns it has been unmistakably proved that the habit of intoxication and all the accompanying vices are greater than elsewhere. Fine buildings, monuments, statues, and paintings, have been plentiful enough in Paris for generations, but the houses inhabited by the people scarcely admit of description for filth and squalor. But the present Government is working wonders every day in removing

these wretched habitations, and erecting better houses in their stead—not in their *places*—for that would only be another form of the evil; but where there were only dark, narrow closes before, we now see wide streets, boulevards, and *Places*, with rows of ornamental trees. The changes are remarkable; but effects, I apprehend, will be more remarkable still. It is not, however, the populous quarters of the capital which are the scene of these wonderful and rapid changes; for though the dwellings of the people and the public thoroughfares are of the first importance, the great utility of fine gardens and pleasure-grounds has not been overlooked.

What the Regent's Park, Hyde Park, and Kensington Gardens are to London, the *Bois de Boulogne* is to Paris. It is situated about half-a-mile beyond the *barrière*, at the western extremity of the capital, and is several miles in extent. This is the favourite resort of all classes during the summer; and, indeed, no place I have seen has more wild, sylvan beauties, or offers more facilities for healthful enjoyment, without, at least, going far from home. The trees are chiefly oaks, but they are only of moderate size, very seldom attaining anything like venerable or majestic proportions—a circumstance which, I think, is only to be explained by want of thinning. This wood has certainly been much neglected for a long series of years; but latterly some decided improvements have been made, and others are in operation. After passing the magnificent *Arc de Triomphe*, at the end of the *Avenue des Champs Elysées*, you continue in the same direction for about half-a-mile, and enter the wood by a large iron gateway on the left. Here and there, under the trees, are several rustic hotels, or *cafés*, for the accommodation or supply of refreshments for gipsy-parties. Further on are groups of children with their parents, enjoying a game at something like “blind man's buff,” and waking the echoes with their shouts and laughter. Under the shade of some wide-spreading branches, and somewhat retired from the gaze of impertinent curiosity, about a score of *demoiselles* are delighting their young hearts with a waltz, or *varsoviénne* to their own music. In another direction are some young people, who have managed to tie a cord to a branch in the form of a swing, and such fun they are getting, while their friends are sitting quietly by on the grass enjoying the scene.

Do you suppose that in these groups the performers are all acquainted with one another? This, very likely, is not the case; on the contrary, some of them may have never met before, and may never meet again. Yet such is the easy, sociable manner of the people, that they are always ready to mingle with one another in any innocent amusement when there is an opportunity.

But let us pass to the Lake, and the alterations which have been made during the last eighteen months. Here and there several wide avenues have been opened up, and the sides of which have been cleared, sown with grass, and planted with fine young evergreens, or deciduous trees of an ornamental character. This is evidently going to be a very beautiful place by-and-by. The roads, with their banks of shrubs, which are kept in the best order, have something the appearance of a carriage way leading to a gentleman's mansion in England. The lake is nearly a mile distant from the entrance to the wood, and I should think it is fully a mile-and-a-half in length, with an average of some sixty yards wide. The ground on each side has been laid out with much taste, its principal features being gentle mounds and valleys, but always rising considerably above the water, which itself takes a great many windings. At different points are some clumps of flowering plants along the banks, besides numerous scattered groups of trees and shrubs. Here and there some masses of rocks and large stones are to be seen. But the effect of the latter is not very good, and the ground on which they are lying is too much like a lawn to be dotted over with large blocks of stone. There are, as yet, no trees stretching far out and dipping their slender shoots in the water, and none of the trees appear likely to assume such a position. But others will, no doubt, be planted in the course of time. As it is, this lake, with the adjoining pleasure-grounds and drives, is really beautiful. I have seen nothing to equal it anywhere. Except for the fine old trees which cover its banks, the *Serpentine* is not to be compared to it.

But what are called the Cascades are not so satisfactory. When we see a cascade, we naturally think of the higher ground which forms its source. But here the cascade itself is the highest point within sight; and when we look round to see where this rush of water can come from we are puzzled. There is, however, a good waterfall in the Exhibition here worked by machinery. It is very like that at the *Bois de Boulogne*, and I cannot help thinking that both are on the same principle. Very clever, certainly, if the flatness and lowness of the adjoining ground were concealed; but as it is, the trick is too glaring. After all, it is a rare treat for the Parisians to see this little counterfeit, with the water bubbling and gushing out and bounding away from rock to rock, then losing itself in the unruffled lake below. When I was standing in the crowd at Versailles while the large fountains were playing, I frequently heard such exclamations as “Magnifique!” “Admirable!” but at the waterfall of the *Bois de Boulogne*, “joli,” “beau,” were the most frequent expressions; for indeed there is nothing grand or magnificent about it; but it is full of that quiet, simple beauty which has an empire in every heart.

The Rockwork itself is composed of large blocks of stone, and, for the most part, the fissures have been carefully closed up with cement; so that there are few nooks or recesses for the growth of Ferns and other plants suitable for such a place.

It is but fair to say, that though the waterfall, which I saw in play, seemed to be the result of machinery, there is, at least, another which is more natural, being caused by the overflow of a second lake on the other side of the drive; but this overflow is, I suppose, only occasional, and chiefly in rainy weather.

No one is allowed to go on the grass, except at a considerable distance from the lake and carriage ways; but there is no lack of fine walks. Yet people will persist in their preference for the green grass; and the officers, or park-keepers on duty are kept busy enough in rectifying mistakes in this way, for as yet the rules and regulations are not standing orders. But the iron pillars have been erected, and the sign plates have had a first coating of paint.

At some little distance, and right under the trees which skirt the wood, crowds of well-dressed people are sitting and lying on the grass; some of them talking and laughing, but the greater number, perhaps, are wrapt in the sanctity of their own thoughts, or contemplating the grandeur and beauty of the scene before them—happy in gazing where nothing fatigues the eye—happier in thinking where nothing vexes the spirit.

In one or two places islands have been formed and rustic bridges erected. An ornamental pagoda is also in course of construction, near the falls; and a covered barge plies from one end of the lake to the other.

But the *Bois de Boulogne* is not half finished. In a few years more it will be the most charming place of the kind in Europe. At the further extremity of the lake, or rather at some little distance beyond it, and about a mile-and-a-half from the waterfall, the ground rises gradually, and when the summit is attained, there is a delightful view of the country all round to the distance of perhaps ten miles, or, at least, as far as the eye can reach. This is something in the way of Hampstead Heath, and equally fine; but here woods and plantations are perhaps more frequent. The Chateau and grounds of St. Cloud are within a distance of three miles, and many private mansions peep out, here and there, from the dense masses of foliage which fill up the scene. In the hollow, and concealed among the noble old oaks and elms which line its banks, the beautiful river Seine flows quietly along. This is the diverging point of several roads, the principal of which are those leading to St. Cloud and Paris; and the greater part of the distance, nearly seven miles, is within the limits of the *Bois de Boulogne*. These roads are kept in excellent order, and the walk on the lawn under the trees at the side is very pleasant. Many people come to this eminence, in fine weather, to view the beautiful landscape around them. A sort of light summer-house has been erected, and an easy chair may be had for one or two sous.

ST. CLOUD.

The Chateau de St. Cloud, according to general opinion

here, is to be the residence of Queen Victoria when she comes to return the memorable visit of the Emperor and Empress. I know that during the last two months a considerable number of artists have been touching up the decorations, and several other movements would seem to indicate that the rumour is well-founded. For this reason, especially, I wished to send you a few notes about the garden; but just for the very reason mentioned, I suppose no person is admitted at present, except by special permission of the director, M. Mathieu, who happened at the time of my visit to be from home. But the wood, or *parc*, as it is called here, is always open to the public, and, like the *Bois de Boulogne*, Versailles, &c., is a favourite resort.

St. Cloud stands on the further bank of the Seine, which is crossed by an elegant bridge of several arches. The ground is hilly, rising, in some places, to a height of two and three hundred feet above the river, and, of course, the paths and carriage-ways take a zig-zag direction. The trees, chiefly elms, oaks, and beeches, are almost all of large growth, and as they have not been spoiled by fantastic cutting and trimming, their general appearance is agreeable and even picturesque. In walking under the wide spreading branches of some, and looking down, over the tops of others, which I had just passed, at the quiet, smooth waters of the Seine below, I was reminded of the country near the Lakes of Killarney, and of the mountain forests of the Highlands. But the comparison can only be carried a little way. At the summit of the hill is an open *plateau*, with a tower in the centre, and either from the tower, or the level ground, a good view of all Paris may be obtained. From this point, several long, dark, high-arched, straight avenues diverge in different directions.

As at Versailles, there are at St. Cloud some large fountains, which are always in full play on fête days, for the gratification of the people, who, besides, are allowed to amuse themselves in every possible manner, and to any extent they please. On the *plateau*, for instance, some ladies and gentlemen, at certain distances, are throwing a large ball to one another; and many more are sitting or standing round looking on. Many a merry peal comes from the happy circle, especially when some one or other of the gentlemen, in running to hit the ball, by a false step overbalances himself, and falls; or, as not unfrequently happens, when, by a misdirected blow, the ball knocks off the hat of some of the spectators, just at the moment looking in another direction. There, at a little distance, a gentleman is enticing his infant son to chase him down the slope, while mamma follows at her leisure enjoying the fun.

In another direction, a merry band of young people, arm-in-arm, have gone scampering down the hill, "as fast as their legs can carry them," every one trying to make more capers and antics than another. When they reach the bottom they continue in slow-marching pace, and strike up, with well kept time and balanced parts, "*La Reine Hortense*" or "*Partant pour la Syrie*." It would make no difference to them if the Emperor himself were to pass; and no doubt it would make as little to him; but he would be pretty certain to be greeted with a good hearty "*Vive l'Empereur*."

The sides of the long, wide avenue, which forms the principal entrance, is freely studded with stalls, at which *bonbons*, trinkets, and toys of every kind, are supplied to children at the most moderate price of one *sous* and upwards. There are also several neat erections, with an elegant arm-chair in the centre, and the following superscription outside: "*Voyons combien nous pesons après dîner*." In addition to all these attractions there is, a little behind the avenue, an open-air first and second-class ball-room," and an excellent orchestra for those inclined to dance. This is inclosed with a neat trellis work, and decorated with flowers, evergreens, and statuary. You see that, in regard to pleasure-grounds and public gardens, the people here have every facility for enjoying themselves; and I should observe, that I do not recollect ever having seen an instance of intoxication or improper conduct.

THE WEATHER.

We have had a pretty equal mixture of sunshine and shower lately, and sometimes, indeed, it has been unseasonably cold; but, on the whole, fine weather has prevailed,

though now the chilly nights of autumn begin to be felt. Some alarming accounts have been published in the English papers respecting the Vine crop. It is quite true that Grapes are not abundant this year; but, so far as I have noticed in the environs of Paris, there is not the slightest trace of the disease. The deficiency is wholly attributable to the heavy rains of early summer. Potatoes, as yet, are untouched; but several samples I have tried lately are not so good as those of an earlier period—not that they are tainted in any way, only they are more waxy; and this effect is, perhaps, caused by the greater moisture of the soil. The crop of wheat, oats, barley, &c., near the capital, is very heavy, and a great part of it is already cut. The wheat, in particular, is beautiful. Reaping is in full operation in this quarter. The common hook and also the scythe are used; but the general practice of cutting grain here differs widely from anything I have seen on the other side of the channel. There are two instruments employed—one for cutting, and another for gathering. The former is something between a hook and a scythe; the blade is about eighteen inches long, from three to four inches broad; nearly at right angles to the blade (which I am supposing to be lying flat) is a handle of fully the same length, and the extremity of this handle, where it is held by the hand, takes a slightly oblique direction, and is about six inches long. The other instrument is simply a hook, about half the size of a reaping-hook, having a handle about twenty inches long: this is held in the left hand, to gather the grain together as it falls under the blade of the other, which is plied like a common scythe, but much more rapidly. With these instruments, the reaper does not require to stoop so much as with the hook; and I cannot but think that it is much more favourable to despatch. It is perhaps worth notice that women, who act a leading part in every sphere and occupation here, are rarely seen reaping. This is the more singular, when we consider that in most parts of England, but especially in Scotland and Ireland, women are much employed in this way.

An experiment was made, a short time ago, with one of McCormack's Reaping Machines, much to the satisfaction of all present. Another experiment, under the auspices of the Prince Napoleon, and the Imperial Commissioners of the Agricultural Machines and Implements of the Exhibition, has just been announced for the 14th.

There have been but few complaints respecting the fruit crop this year, yet people now complain that they must pay not only the double of last year's prices, but even, in some cases, five or six times more than they have been paying for some years past. This is especially the case with such kinds as are used in preserves. The crop of such fruit near Paris is certainly below the average; but I think it is somewhat probable that the greater influx of foreigners and visitors to the Exhibition may have some influence on the prices of these things.—P. F. KEIR.

PLANTING AN ISLAND.

IN No. 357, you ask if any of your readers know, from actual experience, of a better plan for planting an Island than you gave to a subscriber. Now, I must confess that I have had very little experience in planting Islands; but if I wanted to plant an Island with evergreens, and I found it too low and wet for the common Laurel, I should mark out a space all round it a certain width, according to the size of the Island; and then I would dig out the soil from the inner space as wide, and throw on the top of it, which would raise the outer belt nearly as much as you went in depth with the other; and, if the Island was large enough, I should continue another ring the same; but if not, I should throw up a mound as high as I could in the middle, and plant that with the tallest shrubs I had; and the outer belt I should plant next the water outside with common Rhododendrons of as great a variety as I could get, and the other part of it with common Laurel, and other hardy evergreens, which at a distance would appear as though the Island was planted, and would appear so close, too, in a few years. This plan, I think, will raise the shrubs above the level of the water sufficient to prevent any injury from it. At least, it suggests

itself to me from a plan I once adopted with Peas in a very wet garden—an account of which I will send you.—THOS. CARTWRIGHT.

MILLA BIFLORA; OR, THE TWO-FLOWERED MILLA.

THIS beautiful, hardy, bulbous-rooted plant is seldom seen in our gardens, although it is very easy of cultivation. It was introduced into the Royal Gardens, at Madrid, in 1826; but when it was first flowered in England is not exactly known. It was first exhibited at the summer fête in the Horticultural Society's Gardens, at Chiswick, in 1841, and very few visitors passed it without enquiring what the name of that beautiful flower was.

The genus to which it belongs was named after Julien Milla, head-gardener to the King of Spain, and I may remark that a very pretty compliment was paid him in doing so.

Its style of growth is elegant, producing semi-cylindrical, grass-like leaves, from fifteen to twenty inches long, with erect flower-stems of the same length; and although named *biflora*, from its natural style of blooming, often produces, under cultivation, three and four flowers in an umbel, as is evidenced by the specimen now before me. The flowers are five-petalled, and star-shaped, two inches in diameter, and of the most pearly whiteness. Planted in any ordinary garden soil, or fresh loam in February, or the commencement of March, the bulbs grow freely, producing a comparatively small number of leaves. Strong roots will produce as many as four or five flower-spikes in July and August.

It is a desirable plant, and well worthy of cultivation, both for its pretty, chaste, and classical appearance, and from its adaptation to the most humble conveniences as to cultivation.

It is noted in Loudon's "Hortus Britannicus," as being a bulbous-rooted stove perennial; but this is only one of the numerous mistakes which have, and will be, as a matter of course, made respecting many newly-introduced plants, until we become better acquainted with them. The novelty of a plant often induces us to bestow an immensity of unnecessary care upon it, and to draw incorrect conclusions respecting it, which experience ultimately proves to have been waste of time and trouble. I have had this plant to withstand the cold of two or three winters without being injured in the least, but it is not at all necessary to expose it, inasmuch as its season of rest is during our winter months. I have ventured to designate it a hardy bulb, as it is in that class I cultivate it.

There is a doubt existing as to whether there are any other species or varieties of this genus. The plant known under the name of *Triteleia uniflora*, is supposed, properly speaking, to be *Milla uniflora*, but *biflora* is sweet-scented, and *uniflora* is offensive smelling.—C. B. S., Jersey.

FUCHSIAS AS HANGING PLANTS.

G. C. SCHWABE, Esq., of Liverpool, whose most beautiful conservatory we hope to depict very shortly, writes as follows:—

"The best hanging plants I have found out yet are *Fuchsias* of every kind. They are easily trained, and make a handsome show. The flowers appear to be made to look up to.

"I have the *Fuchsias* with the white corolla; they must be vastly improved upon before they are worth much.

"We bloom *Pleroma elegans* without the slightest difficulty, year after year, treating it exactly like the *Epacris*."

POTATO DISEASE.

WE are sorry to announce, that since Friday, the 10th inst., the Potato blight has re-appeared, and attacked the leaves and stalks with a malignancy almost indescribable in every garden and field hereabouts, and the usual stench

emitting from them is now everywhere unmistakable, and none have escaped but the very early kinds. This day it is spreading like wildfire, and no doubt that ere this communication appears in type it will have progressed considerably and universally. How far it may prove fatal to the tuber remains yet to be known; but judging from experience in past years, their luxuriance in foliage renders them more susceptible to decay. The only alternative we know of is, that of cutting off their tops and leaving them to chance, thus bleeding them, as it were, to death by degrees, and causing those that are yet uninfected to be more dry, and mealy, and in better keeping condition than they would otherwise be. Pulling the stalks up is not so well, as it destroys their vitals instantaneously, thus shutting in disease, or setting the so-called blood or sap, and subjecting them to further decay. It is also objectionable, as no index is thus left where the roots are, and when taking them up they are subject to be pierced by the fork, &c. Be this as it may, all should be done before the tubers become too far contaminated. It will be no more use to amputate, or pull them thin, than it would be to cut off a man's arms or legs infected with disease, to prevent putrefaction from such infusion which had been allowed to taint his whole body. As another illustration of our meaning:—If sudden disease attacks a pig, and it is knocked on the head, and thus killed instantaneously, it soon becomes putrid and unfit for human food; not so if phlebotomy is resorted to at its first appearance, it then renders it marketable. Just so with the ill-fated Potato. Dry, sunny weather may, as it were, starve the fungus as it comes on the leaves, and save the tubers; and it is more encouraging to know that it is spreading on the leaves so rapidly, than it would be to see them linger for a lengthened time.—HARDY AND SON, Seed Growers, Maldon, Essex.

QUERIES AND ANSWERS.

GARDENING.

STRAWBERRIES NOT PRODUCING A SUCCESSION.

"In the spring of 1853, a piece of ground, which up to that time had been pasture, I planted with Strawberries. The soil is good, though rather light, and about sixteen inches in depth. I had it trenched two spades deep, and where the rows were to be planted the soil was taken out to the depth of a spade, and a good foundation of cow manure put in. The rows were planted two feet apart, and the plants fifteen inches distant in the rows. The runners have been regularly cut off, the beds kept clean (but not dug), and a top-dressing of manure applied in spring.

"Last year the beds produced only a thin crop, though the fruit was very fine. This season the beds were completely covered with bloom, and the berries appeared to set satisfactorily. The *Black Prince* commenced ripening at the end of June, *Keens' Seedling* the first week in July, and the other sorts a few days later. All the sorts gave promise of an abundant crop, and afforded good gatherings for about a week from the time of ripening, after which they fell off all at once, and produced only poor, little, deformed berries, almost destitute of flavour.

"I grow several of the most esteemed sorts, and I should say that *Keens' Seedling* was the first to fail, and that *Kitley's Goliath*, *British Queen*, and *Nicholson's Ruby* have produced the longest succession of good fruit.

"Does the fault lay with particular sorts of Strawberries, or is there something wrong with the soil, or in my mode of treatment?"

"I have read several excellent articles on Strawberry culture in THE COTTAGE GARDENER, but do not remember any remarks on this particular point. As I am about to plant some new beds, your opinion and advice on this point will be highly valued by me, and will, I have no doubt, be of great service to many of your readers as well as—R. N., Lancaster."

[There seems nothing sufficiently wrong in your Strawberry culture to be a cause of the fruit's failure. Indeed, the present is remarkable as being a deficient Strawberry

season. If your Strawberry plants are weak, do not remove the runners until after these have rooted.—ED. C. G.]

FORCING MOSS ROSES.

"Is there any means of causing *Moss Roses* to flower in winter? and if so, which variety will do so?—SAGITTARIUS."

[The common Moss Rose was had in bloom on the first day of the year more than forty years ago. We have forced this Rose for some years so as to "come in" before the end of January; but, to tell the truth, it is not worth forcing with our present knowledge. We want something more than our present knowledge to enable us to force Moss Roses worth looking at before the middle or very end of February; and there is not one forer of Roses in England, out of every ten or fifteen who make the attempt, who can show a Moss Rose plant fit for the drawing-room before the March wind raises the dust. Mr. Salisbury, as far back as 1828, or 1829, detailed the way for having Moss and Cabbage Roses every day in the winter. Fourteen years afterwards, Sir J. Paxton reproduced this article, and thought he made it as plain as budding. However, smaller men often made the attempt, but could never succeed to their own satisfaction. For our part, we only know that Moss Roses may be had in *cut flowers* by the middle of January, but we would not undertake to show *plants* so early as that. We shall be obliged by any practice-founded information on this subject.]

SOWING PRIMULA SINENSIS AND ANNUALS.— TREATMENT OF DOUBLE DAISIES.

"Though in a humble station, I am a great lover of flowers, and having no resources beyond my window, and a border in not a very favourable aspect, I am, therefore, compelled to exert all my managing powers to keep a succession of flowering plants in my window during winter and early spring. Will you, therefore, kindly tell me whether it is now too late to sow *Primula sinensis*, my seed having failed to grow? Secondly, what means can I adopt to keep some *Double Daisies* seedlings through the winter? And, thirdly, how and when should I sow the Red and White *Candy Tuft*, so as to have it blooming in pots in the spring? Must I sow it in the open air and transplant, or sow it at once in pots? Also, *Collinsia bicolor* to bloom in spring? If there should be any other sort of annual you can recommend for a similar purpose, you will greatly oblige by naming some.—A COTTAGER'S WIFE."

[It is too late to sow *Primula sinensis*. All cottager's wives ought to have sown it long ago. The safest way to keep seedlings of *Double Daisies* through the winter is not to treat them now like "spoilt children." Allow them to take care of themselves from this very day, and our word for it the frost will not hurt them. If you have them in pots, or pans, transplant the balls entire, and let them be a little higher than the ground round them; water them if they are very dry till the end of September; after that, never go near them till next March, for if you do, your motherly kindness will be suggesting some "comforts" for the "poor things," which will be seen to act the other way.

This is a good time to sow *Candy Tuft*, *Gilia tricolor*, *Collinsia bicolor*, *Blue* and *Spotted Nemophila*, and twenty more kinds of annuals which make good pot-plants in the spring. See what is said about them, to-day, in another column.]

LYCASTE SKINNERII AND MAXILLARIA HARRISONIÆ.

"When does the bloom appear on *Lycaste Skinnerii* and *L. Harrisonii*; before or after the bulbs are grown?—A YOUNG ORCHID GROWER."

[We are not sure that we comprehend your meaning. Both of them flower before they make new bulbs, and after they have made them. *Maxillaria Harrisoniæ* is probably what you call *Lycaste*, and it generally blooms towards the end of the autumn, after ceasing to grow for that season.

Lycaste Skinnerii blooms from Christmas to May, according to the treatment; but whether that is before or after making a new bulb, who can tell? for the answer would tell both ways. This is just as if one asked if Christmas comes in before or after the new year.

The leaf you sent was the fleshy, gouty leaf of *Brassavola glauca*, from Mexico.]

CAPITAL REQUIRED FOR FARMING.—WHAT SHALL I DO?

"Supposing a man had a great wish to take a small farm, I will say 100 acres, or less; what capital ought he to have per acre to start with, and to have reasonable prospect of getting on, and himself to take a share of the labour?

[£8 to £10 per acre.]

"The second question is, supposing a man, between thirty and forty years of age, had a £100, or £150; but no particular knowledge of any business, or calling, neither had anything permanent to look forward to; what would you advise him to undertake to get a living? He is strong, healthy, and determined to get on in whatever he undertakes. I have great faith in your judgment, and should feel much obliged if you would give me your advice.—W. W."

[Let him join some one who is honest, and has equal mental determination, and who is skilled in some trade, but needs a little capital.]

EVERGREENS FOR A TRELLIS.

"I have a trellis by my back door six feet high and fifteen feet long, which I have put up in order to stop the current of wind from the east. What will do to cover it with? They must be hardy creepers, for it is exposed to the east.—CLERICUS."

[For ourselves, we would plant half-a-dozen of common *Laurels* three feet behind the fancy trellis, and four *Japan Honeysuckles* on the side next the house and train them over this trellis. Your own plan of hiding the walk is very good.]

COVERING A HOUSE WITH ROSES.

"I beg to solicit your attention to a system I am about to put into practice, viz., of filling a space of the front of a house with Roses.

"The height of the front perpendicular is twenty-four feet, there being two windows, one direct above another, along the whole length of the house, besides doorways. Now, between each two windows, is a space of this said wall about five feet wide, which wall is ornamentally plastered. I have caused two small rods of iron to be run up each space, from bottom to top, each rod about six inches from the edge of the windows; two plants of the same sort to each space, and each space of different sorts. Now, whether I could have some (upon their own roots) of the best sorts of Hybrid Perpetuals, or Bourbons, or Noisettes of vigorous habit to fill this wall in the course of three or four years; I would, of course, encourage them to the top as soon as possible, and then train horizontally between the rods, for which smaller wires would be provided when wanted; or whether you recommend less important climbers to be budded upon each season after growths being made?

"Provided I cannot find good plants upon their own roots, would budded ones be likely to continue healthy?

"The following are such as I consider most suitable in the classes to which they belong:—

"*Blairii*, *General Jacqueminot*, *Barronne Hallez*, *Jules Margottin*, *Triomphe de Paris*, *Mrs. Rivers*, *Duchess of Sutherland*, *Souvenir de Leveson Gower*.—JNO. STEWART."

[Your plan is very good indeed; and if you make the border equally good, and give abundance of water to the roots in summer, you may soon have your house covered with Roses, but not with the kinds you mention as principals. *Blairii* is the only one in your list which will reach the top in ten years. *Jules Margottin* and *General Jacque-*

minot might get up to ten or twelve feet, in eight or nine years, and perhaps a little higher. The rest cannot be depended on to rise above ten feet high in a life-time. You must use fast-growing *Noisettes*, and bud others on them, beginning at six or eight feet from the ground, and use your present selection for covering the bottom. There is no other way that you can manage. *Noisette le Riche* would soon reach the top, and is one of the oldest and hardiest. *Jaune Desprez* is another, and a better one to take buds. *Fellenberg* is the best crimson among *Noisettes*, is a fast grower, and tolerable good to bud on. *Solfaterre* is very strong, and all the strong Bourbon Roses do on it just as well as on their own roots; and most other Roses, no doubt, but we have not seen them tried. Why not try one of the *Cloth of Gold*? It has done well in some places, where plenty of room is allowed, and it is a famous one to take buds, or, at least, to hold them good for a length of time; but to manage a high wall of Roses by extra budding is a different art, and requires constant attention to see that none get too much power. With those who understand Roses well, and have time to attend to them properly, there is no better way of making a great show in a small space.]

WHAT IS A NEWLY-INTRODUCED PLANT? PRIZES FOR SEEDLINGS.—ARRANGEMENT OF PLANTS EXHIBITED.

"Will you oblige me by answering the following questions, for the satisfaction of persons interested in, but ignorant of, floriculture?"

1. "If a prize were offered for a newly-introduced plant, and none other than *Cissus discolor* were exhibited, would it be right to withhold the prize from it, because it was not in bloom? No condition having been expressed in the schedule of prizes that the plants in this particular class were to be in bloom; and this plant not having been exhibited at any of the Society's previous exhibitions."

[*Cissus discolor* has never been exhibited for its flowers, and never will be, for this reason, that they are no better than Nettle flowers. If *Cissus discolor* has been grown in the island of Jersey two years running, without being exhibited for a prize, and some one enters it as a new plant, say this season, it would not be entitled to a prize for novelty. Or say, a new plant is common round London for a year or two before any one thinks of showing it; but that does not render it a new plant at the time of showing. But, on the other hand, a plant may have been in the country for years, and from its being extremely difficult to grow, or increase, it should have a prize the first time it was exhibited. *Agnostus* (now *Stenocarpus*) *Cunninghami* is a plant in point. If we recollect rightly, it was twenty years old, or in cultivation, before it was exhibited; yet it had a prize. The truth of your story, however, is this;—the committee made a blunder in the schedule, in not specifying whether new plants were or were not to be in flower.]

2. "If a prize for a newly-introduced bulb were offered, and a specimen-plant, beautifully in bloom, of *Milla biflora* were exhibited, would it be consistent with justice, and common honesty, to withhold it, because it was the only one exhibited?"

["Common justice" is, or ought to be, blind, and "common honesty" could not, therefore, give a prize for *Milla biflora* as a new bulb; because *Milla biflora* is a very good and very old bulb indeed; and, besides, would flower in an open border better than in a pot. It is not a pot-bulb at all; particularly in Jersey.]

3. "Is it fair to withhold the prizes offered for seedling flowers when they are produced according to schedule? And must seedling flowers, of necessity, be preferable to any varieties of their species in cultivation, to be prize-worthy?"

[You do not state this question clearly enough. Your meaning seems to us to be this—Are seedlings worth a prize if better seedlings of the same plants are already in cultivation? A seedling is not worth a prize-button if it is not better than all the varieties or seedlings of the same plant in cultivation. You might spend a fortune raising

seedlings of "all sorts," and yet not one of the lot, or the whole lot together, be worthy of the smallest prize. Not seedlings, as such, but superior varieties, are contemplated in these offers for improving.]

4. "Is it considered characteristic of good taste to decorate a stand of plants, by suspending Ferns and Orchidaceous plants on a branch of a tree in the midst of it? and should a stand so garnished be decorated with a prize, in preference to a stand containing superior plants arranged in the usual style?—*AMICUS, Jersey.*"

[It is good taste to exhibit Orchids and Ferns suspended as you say; but that degree of taste should not qualify the plants, so exhibited, for a prize, over similar plants which were better grown and in better bloom. If two such collections were of equal merit in growth and bloom, the suspended collection would take the first prize, if the arrangement was considered to be very tastefully done. A man of no taste might spoil a good collection of Orchids by his clumsy way of suspending them. Very many Orchids should never be exhibited, except dangling in the air, as it were.]

THE POULTRY CHRONICLE.

As we feel quite at home, we shall make no apologies; and without pretending to an over-weening confidence in our position, we shall just keep on as we left off. Last week we bid you adieu in the *Poultry Chronicle*; this week we welcome you to THE COTTAGE GARDENER. We trust we shall not be deemed presumptuous. We do not use this tone to all, but to those who have been with us during the last eighteen months.

There is no such thing as equality, not even in writing; we may be smiled upon when we are "i' the vein;" we may be read attentively when by accident we have been instructive; it is possible—alas! that it should be—that we have been pooh! pooh'd! when prosy and below the mark.

A simile is not, perhaps, less striking, because familiar and homely. We will then say for our introduction, as Mr. Merriman has said time immemorial, in circuses and at fairs, "Here we are again," and "still harping" on our Poultry.

In our old place, we left off about "Cups at exhibitions," and we would resume the subject, as we do not yet believe it is thoroughly understood.

Where the funds will admit of it, we are advocates for a cup for every breed. We dare not touch on a few pieces of plate for the principal breeds, where the funds are low, as every one who exhibits thinks the race he or she keeps is the principal. We, therefore, come at once to the cup for the most successful exhibitor; and that for the taker of the largest number of prizes.

We think, in the first case, there should be a certain limit, and that no one should be eligible to compete for the prize who does not exhibit at least six pens. We will meet our objector as we go on. "How can I," says one, "hope for success, as I keep but two breeds?" We answer, very easily. It is a lighter task to excel in two than in a dozen; take all the prizes in the classes in which you exhibit, and your success is certain.

We object strongly to the usual wording of the second class, "The taker of the largest number of prizes." We

would everywhere alter it for "The owner of the best collection." Although it is not so frequently met with as of old, yet it is not the less true, that prizes, although awarded, are not always deserved, and may be due more to the absence of good competitors, than the actual merits of the birds. If the cup is to be awarded according to the wording of the rule, and that runs as we have stated, a pen that wins "spite of" its defects, weighs as much as another that is successful "because of" its merits. In fact, the office of judge, so far as the principal prize is concerned, becomes a simple sum of addition.

Let us turn again to our objector. The meaning, he says, of this prize, is to induce numerous entries. We think this wrong both in principle and result. In principle, because we think from sixteen to twenty pens the greatest number one competitor should enter. We like to take the Birmingham Show for a model; they found it an evil; hence the rule acted upon last year, that no subscriber should enter more than four pens. We are told this is evaded; that the husband, wife, and two children, all subscribe, and thus sixteen pens are sent from one yard. Granted; but this does not alter our position. Entered in different names, if the birds are sufficiently good, many prizes may go to one family, but the cup could be awarded to only *one* member, and for the birds entered in one name. We think it wrong in result, because, although you may induce one to send thirty pens, you discourage twenty who would send six pens each. It is always adverse to the best interests of an exhibition for one exhibitor to have an easy victory in many classes. Prizes should be sown broadcast over the length and breadth of the kingdom, and not dished in one line. We would, therefore, everywhere offer our chief prize for the best collection of not less than four, five, or six pens, according to the probable extent of the show, and the number of entries likely to be made. We have had some experience of these matters, and have no desire to add to the already onerous duty of judging, but we think this decision may safely be left to those who, from the sifting to which they subject every class, obtain a knowledge of the merits of the prize birds which cannot be gained by any one else. As we have before stated, all first-prize birds are not equal in merit; and it cannot be fair for six pens of ordinary calibre to be rewarded in preference to four of unusual excellence.

SEEING the statement recently put forth by *Gallus*, about the sex of his Geese, claimed at the Liverpool Show, we cannot help repeating our advice to all Committees, to put up, in the most conspicuous part of the building or grounds, a notice, stating that while they will do all in their power to please all parties, they will not hold themselves responsible for the sex of any pen purchased. It is the interest of every exhibitor to send birds answering all the requirements of the class in which they compete. The judges act to the best of their ability, and if a mistake occur, which will sometimes, we think the purchaser should not object to his

share of an error which none intended, and which was beneficial to no one.

EGG-STEALERS AT POULTRY SHOWS.

I WAS very much displeased on reading the letter of "A Subscriber," in *THE POULTRY CHRONICLE* for August 15th. He describes an instance of theft, which he saw, and neglected to report, and which, therefore, lays him open to the charge of having connived at it. He says, at Lincoln a man was appointed to look after all eggs laid by the poultry. I believe at *all* shows the men have all orders to look after the eggs. At Birmingham, the most complete show of all, this is the case; yet, notwithstanding, I saw several eggs that I could have taken, and none of the men be the wiser. "Subscriber" thinks a remedy might be found. That remedy lies with such as he, who see the theft committed, and do not report it. I consider such men quite as bad as the thief. And to mend the matter, he writes a letter in a public journal, laying the blame on committees, or rather, I should say, insinuating that the blame lies at their door. I deny that *any* blame lies with the committee. The public cannot expect them to have an eye on every pen at all times. The thing is preposterous. If men are intending to take eggs, they will, of course, have an eye on the officials, and if any other party detects a thief, it is his place to give the information at once. If he has not moral courage to do this, let him adopt a plan of summary punishment, as I did, before I became mixed up with poultry show management. I saw, at a poultry show, a man take an egg from a pen by hooking it out with his walking stick. I noticed the pocket he put it into; it was the outside one of a shooting-jacket. I got close to him, and felt the pocket, and found something like half-a-dozen eggs, and a pocket handkerchief. I smashed all the eggs, and then went to a distance to watch the result. Very soon he wanted his handkerchief, and put his hand in his pocket for it. You may imagine his consternation, and on his looking round he saw me laughing at him; he walked away crest-fallen.

I hope the next time "A Subscriber" sees a theft he will give the thief into custody at once, and not complain that committees do not pay persons to detect thieves.—HON. SEC.

[This letter was written for *THE POULTRY CHRONICLE*; but since it was written the writer sees that the P. C. is transferred to *THE COTTAGE GARDENER*. As the subject is one of importance to those interested, the writer forwards it to *THE COTTAGE GARDENER*.]

VERTIGO IN POLAND CHICKEN.

I HAVE this season been paying more than usual attention to Polands, and have, consequently, reared a large number of chicken. As the result of my experience, I may state, that I have found the pure white not more delicate than fowls in general; but I have not been fortunate with my young Silver-spangled birds. One disease which affects Polands to a much greater degree than other varieties, and which is, doubtless, connected with the peculiar organization of the brain, is Vertigo.

The bird affected twists the neck until the crown of the head is on the ground, and the lower jaw is upwards; the muscular movements are irregular; the animal, in severe cases, moving backwards; there is also great difficulty in drinking; the head, on being raised, is carried so far backwards as to cause the patient great inconvenience.

The disease evidently depends on an undue determination of blood to the brain, and, unless speedily remedied, proves fatal; all those birds I have left unassisted have died; whereas, those that I have taken in hand are all alive to testify to the success of the remedial measures employed.

In severe cases, I bleed freely, by opening a vein in the under surface of the wing, causing the blood to flow, by pressing on the vein at some place between the incision and the body; the quantity of blood abstracted must depend on the age of the fowl, and on the severity of the case; from half a tea-spoonful, to four times that quantity, I have found suf-

ficient in all cases. In milder cases, a purge remedies the evil.

Some of the results of the disease are interesting. I had one half-grown bird that could not get into the fowl-house, because there was a step about four inches in height to pass over; he could readily get upon the step, but the sight of the descent of four inches was too much for the weak state of his nervous system; it immediately produced Vertigo, and he fell back into the yard, to repeat the attempt again and again, until pity for his state induced some one to lift him over.

Old birds, particularly after high feeding, are also subject to the same disease. In severe cases bleeding, and in milder ones low diet and brisk purgation, will usually be found effectual in establishing health.—W. B. TEGETMEIER, *Wood Green, Tottenham.*

NOVELTIES AT ANERLEY POULTRY SHOW.

It may appear, at the first sight, an objectionable practice for an exhibitor to call attention to the birds he proposes to exhibit at a forthcoming show; but as those that I am about to describe are shown merely as the result of some experiment, and cannot by possibility come into competition with any others, I feel no delicacy about the matter.

It is known to several of the readers of *THE COTTAGE GARDENER* that I have, for some time, been endeavouring to restore the long-lost breed of Black-crested White Polands; this endeavour has led me into many experiments to determine the possibility of influencing the colour of chicken, and it is to one of the more remarkable results that I beg to call attention. I have entered, at Anerley, a pen of Polands, consisting of one pure White, one pure Black, one uniform Grey, one Mottled, one Grey-crested White, and last, but certainly not least, one Black-crested White, the whole of which were bred from one and the same single pair of old birds. To the accuracy of this statement, extraordinary as it may appear, I pledge my word there was no possibility of mistake, for the pair of birds from whom the eggs were obtained were kept quite distinct from all other birds; in fact, with the exception of some Cochin hens kept as sitters, there were no fowls in their neighbourhood.

What the means are by which such results are obtained, I do not feel myself at present called upon to publish; possibly, the mode of producing the long-coveted black-crested white, may, like the origin of the Sebright Bantam, ever remain a mystery.

Be it understood, however, that the black-crested white to be shown at Anerley is not exhibited as a perfect specimen; it is sent there merely as one of a variously-coloured set of chicken produced from the same two birds.

I also hope to be able to forward to the show a most exquisitely beautiful set of models, illustrating, from actual dissection, the development of almost every organ in the chick, from the first hour of incubation to the 15th day.

These models, which are totally unlike any that have ever been previously made, have received the unqualified admiration of some of the highest physiological authorities; and I would especially direct the attention of any person interested in embryology to them. After such unqualified praise, I need scarcely state that they are not my own production, but were made by Mr. Tuson, who is well-known as an unrivalled anatomical modeller.

The identity of the Cochin and Brahma, and the distinction between Spangled and Pencilled Hamburgs, I hope, also, to illustrate by a few preparations.

In conclusion, I may state that there is every prospect of a first-rate show at Anerley, nearly 1000 pens are entered. The whole arrangements appear to be on a scale of great liberality, and there is reason to hope, that with the cordial co-operation of all parties interested in poultry, we may have a most successful exhibition; in fact, the high character and position of the responsible promoters of the show are a pledge of its being conducted in a most satisfactory manner, and that it will be free from those objectionable practices that have too often damaged and disgraced Poultry Shows.—W. B. TEGETMEIER, *Wood Green, Tottenham.*

REARING YOUNG MUSCOVY DUCKS.

"Can you, or any of your subscribers, give me information relative to the treatment of young Muscovy Ducklings? Hitherto, I have been unsuccessful in rearing any. I have a hen sitting at present, and am very desirous of rearing the brood, if possible, and am told they must be kept entirely from the water, and fed on almost dry food. Any directions on this subject will oblige—A REGULAR SUBSCRIBER."

[Ducks of any description are reared with much greater difficulty at this hot season than earlier in the year, as they suffer very much from the heat. Young ducks do much better away from any large piece of water, as they quite exhaust themselves, at times, in chasing the insects flying over the surface. This remark is still more applicable to Musk Ducklings, as the plumage and down of that variety is less repellent of wet than the down on common ducklings.

A shallow flower-pot saucer, frequently replenished, will be all they require. Oatmeal and barley meal mixed into a crumbly mass with water, particularly the former, will be found the best food, and during the day the ducklings should be allowed a range where they could supply themselves with insects and herbage. We have never found any difficulty in rearing this variety at an earlier season of the year, and found hens the most convenient and preferable mothers.]

LONDON MARKETS.—AUGUST 20TH.

COVENT GARDEN.

In addition to the varieties of fruits which we recorded as having appeared in the market last week, we have now the *Lammas*, or, as it is sometimes called, the *Huntingdon Pear*, and the *Citron des Carmes*. There is still an abundant supply of the *Black Coronne Cherries*, but the *Bigarreaux* are disappearing. Every day now adds to the novelties in this way, and ere long we shall have a full representation of the British Pomona. *Peaches*, *Nectarines*, and *Apricots*, are becoming more plentiful, and *Grapes* are also abundant. The arrivals of new *Nuts* from Algeria, of which we took notice last week, are on the increase; but, we must say, they are hardly worth cracking, so little is in them. Vegetables are very abundant, and so also are flowers, which consist of *Heliotropes*, *Roses*, *Verbenas*, *Mignonette*, *Fuchsias*, *Geraniums*, and, in short, everything which is now found in English gardens.

FRUIT.			
Apples, kitchen,		Almonds, per lb..	2s. „ —
per bushel	3s. to 4s.	Nuts, Filberts, lb.	— „ —
„ dessert, doz.	4s. „ 6s.	„ Cobs, lb. . .	— „ —
Pears	— „ —	„ Barcelona,	
Apricots, per doz.	2s. „ 2s. 6d.	per bushel . . .	20s. „ 22s.
Peaches, per doz.	8s. „ 15s.	„ Brazil, per	
Nectarines, doz.	8s. „ 15s.	bushel	12s. „ 14s.
Cherries, lb. . . .	2d. „ 6d.	Chestnuts	— „ —
Plums	— „ —	VEGETABLES.	
Pine-apples, lb. . .	3s. „ 6s.	Cabbages, per doz.	9d. to 1s.
Grapes, lb.	3s. „ 6s.	„ Red, per doz.	2s. „ 4s.
Melons, each . . .	2s. „ 6s.	Cauliflowers, doz.	2s. „ 3s.
Figs	— „ —	Brocoli	— „ —
Gooseberries, per		Savoy	— „ —
quart	2d. „ 4d.	Greens	— „ —
Currants	4d. „ 6d.	Spinach, per sieve	1s. „ 2s.
Raspberries . . .	6d. „ 9d.	Peas, per half sieve	
Strawberries, per		1s. 6d. „ 2s. 6d.	
pottle	4d. „ 6d.	Beans	— „ —
Oranges, per 100	4s. „ 10s.	French Beans, per	
Lemons, doz. . .	1s. to 1s. 6d.	bushel	4s. 6d. „ 6s.
		Scarlet Runners	4s. 6d. to 6s.

COVENT GARDEN — Continued.

Carrots, bunch .. 4d. ,, 6d.	Small Salad, per
Parsnips	punnet 2d. ,, 3d.
Beet, per doz. 1s. ,, 1s. 6d.	Artichokes, each 3d.
Potatoes, per cwt. 10s. ,, 20s.	Asparagus, per
Turnips, bunch .. 2d. ,, 6d.	bundle.... 1s. 6d. ,, 4s.
Onions, young,	Sea-kale, per pun. — " —
bunch..... 1d. ,, 2d.	Rhubarb, per bdl. 2d. ,, 6d.
Leeks, per bunch 2d. ,, 3d.	Cucumbers, each 3d. ,, 8d.
Garlic, per lb. .. 6d. ,, 8d.	Vegetable Marrow 2d. ,, 3d.
Shallots, per lb. 4d. ,, 6d.	Tomatoes — " —
Horseradish, per	Mushrooms, per
bundle.. 1s. 6d. to 2s. 6d.	pottle 8d. ,, 1s.
Lettuce, Cos, per	HERBS.
score 6d. ,, 1s.	Basil, per bunch 6d. to 9d.
„ Cabbage 6d. ,, 8d.	Marjoram, per
Endive, per score 1s. ,, 1s. 6d.	bunch 6d. ,, 9d.
Celery, per bun. 8d. ,, 1s.	Fennel, per bunch 2d. ,, 3d.
Radishes, Turnip	Savory, per bunch 2d. to 3d.
per doz. bunches 1s. ,, 2s.	Thyme, per bunch 2d. ,, 3d.
Water Cresses, per	Parsley, per bunch 2d. ,, 3d.
doz. bunches.. 6d. ,, 9d.	Mint, per bunch 4d. ,, 6d.

POTATOES.

Regents, York,	Regents, Scotch,
per ton 160s. to 195s.	per ton 125s. to 150s.
„ Kent and	Scotch Reds.. 120s. ,, 140s.
Essex 140s. ,, 180s.	„ Blues 95s. ,, 130s.
„ Lincoln 120s. ,, 180s.	

GRAIN AND SEED.

WHEAT.	PEAS.
Kent and Essex,	Boiling, per qr. 42s. to 47s.
red, per qr. .. 70s. to 80s.	Common 36s. ,, 38s.
Ditto, white.... 76s. ,, 86s.	Grey 37s. ,, 40s.
Norfolk and Suf-	Maple 40s. ,, 42s.
folk 71s. ,, 78s.	SEEDS.
Dantzic 84s. ,, 92s.	Turnip, White, per
Rostock 80s. ,, 90s.	bush. — to —
Odessa..... 70s. ,, 78s.	Swede — " —
American..... 82s. ,, 86s.	Rape 84s. ,, 86s.
BARLEY.	Linseed, sowing 74s. ,, 76s.
Malting 36s. to 38s.	„ crushing 70s. ,, 73s.
Grinding and	Clover, English,
Distilling.... 29s. ,, 31s.	red..... 60s. ,, 68s.
Chevalier 34s. ,, 36s.	„ Foreign do. 52s. ,, 57s.
OATS.	„ White 68s. ,, 73s.
Scotch, feed .. 28s. to 31s.	Trefoil 28s. ,, 32s.
English 24s. ,, 26s.	Rye 40s. ,, 43s.
Irish 24s. ,, 27s.	Tares — " —
Dutch Broo .. 25s. ,, 28s.	Canary 50s. ,, 54s.
Danish 24s. ,, 28s.	Hemp 50s. ,, 53s.
Russian 24s. ,, 28s.	Linseed Cake, per
BEANS.	ton £12 to £12 10s.
Harrow 41s. to 43s.	Rape Cape £6 10s. ,, £6 15s.
Pigeon 42s. ,, 48s.	Indian Corn .. 47s. ,, 50s.
Tick..... 40s. ,, 42s.	

HOPS.

Mid & E. Kent £10 to £12	Sussex £8
Weald of Kent £8 to £10	

HAY AND STRAW.

Clover, 1st cut per	Meadow Hay, new 95s. to 105s.
load 110s. to 147s.	Rowan — " —
Ditto, 2nd cut 90s. ,, 140s.	Straw, flail 30s. ,, 36s.
Meadow Hay .. 90s. ,, 120s.	Ditto, machine 28s. ,, 30s.

MEAT.

Beef, inferior, per	Mutton, mid. 3s. 10d. to 4s. 4d.
8 lbs. ... 3s. 4d. to 3s. 6d.	Do. prime 4s. 6d. to 4s. 10d.
Do. mid... 3s. 8d. to 3s. 10d.	Veal 3s. 10d. to 4s. 10d.
Do. prime... 4s. to 4s. 2d.	Lamb 5s. 4d. to 5s. 10d.
Mutton, in-	Pork, large 3s. 8d. to 4s. 0d.
ferior... 3s. 4d. to 3s. 8d.	Ditto, small 4s. 0d. to 4s. 6d.

POULTRY.

We have to record the usual Market in the middle of August—an ample supply and decreasing demand. Grouse were scarce for the first two days, and realized large prices, but since then there have been many at Market, and the quality is much better than we were let to expect.

Large Fowls 5s. to 6s. each	Pigeons 9d. to 10d. each
Smaller do. 3s. 6d. ,, 4s. 6d. ,,	Quails .. 1s. 3d. to 1s. 6d. ,,
Chickens .. 2s. to 2s. 9d. ,,	Rabbits 1s. 5d. to 1s. 6d. ,,
Geese 6s. to 6s. 6d. ,,	Wild do. 9d. to 10d. ,,
Ducks 3s. to 3s. 6d. ,,	Grouse 2s. 6d. to 3s. 6d. ,,
Leverets 3s. to 5s. ,,	Old do. 1s. to 1s. 9d. ,,

PROVISIONS.

BUTTER.—Cwt.	CHEESE.—Cwt.
Dorset, fine .. 98s. to 102s.	Cheshire, fine .. 70s. to 84s.
Do. middling .. 80s. ,, 86s.	Gloucestershire,
Fresh, per doz.	double 68s. ,, 74s.
lbs. 8s. ,, 12s.	Ditto, single.... 56s. ,, 70s.
Friesland 100s. ,, 104s.	Somerset 70s. ,, 84s.
Kiel 96s. ,, 100s.	Wilts, loaf 68s. ,, 78s.
Carlow 96s. ,, 98s.	Ditto, double .. 72s. ,, 78s.
Waterford 98s. ,, 102s.	Ditto, thin 54s. ,, 64s.
Cork 98s. ,, 102s.	Ditto, pines 72s. ,, —
Limerick 92s. ,, 96s.	Berkeley, thin .. 62s. ,, 66s.
Sligo — " —	
BACON.—Cwt.	HAMS.—Cwt.
Wiltshire, dried 78s. to 80s.	York, new 80s. to 90s.
Waterford 72s. ,, 74s.	Westmoreland.. 76s. ,, 86s.
	Irish..... 74s. ,, 84s.

WOOL.

Down Tegs 1s. 2d. to 1s. 3d.	Leicester,
Ditto Tegs and	fleeces .. 1s. ,, 1s. 1½d.
Ewes .. 1s. 1d. ,, 1s. 2d.	Long, heavy do. 11d. ,, 1s.
Half-bred Hog-	Combingskins 10½d. ,, 1s. 1d.
gets 1s. 3d. ,, 1s. 3½d.	Flannel wool 1s. 1d. ,, 1s. 2½d.
Do. Wethers 1s. ,, 1s. 2d.	Blanket wool .. 6d. ,, 11d.
Kent Fleeces 1s. 1d. ,, 1s. 2d.	

TO CORRESPONDENTS.

FLOWER-GARDEN SOIL (J. H.).—It can be too light as well as too heavy. When too light the flowers are dwarf, and soon burn up. Mix some of the heavy soil taken away with leaf-mould and lime-rubbish. Turn the mixture over two or three times, and dig it into the soil late in the autumn. Ridge the soil all the winter. In the spring level it, and you will find the staple much improved. *American Plants* do best in a soil all peat, with an annual dressing of leaf-mould. *Guano* is best applied to flowers in a liquid form, very weak, an ounce to four gallons.

CLUB ROOT (E. S. Moltram).—See what Mr. Errington says in one of our pages to-day.

WALTON'S PROPAGATING APPARATUS (A Constant Reader).—Mr. Beaton has recently explained that fresh experiments are making with this. Your Moss is not a Moss, but *Lycopodium helveticum*. No one can tell the names you seek from a leaf.

STRAWBERRY-BEDS (R.).—Plant well-rooted runners rather than old plants. No absolute rule can be given for the time Strawberry-beds should remain before fresh beds are made. In some soils every third year. In moist alluvial soils we have known them as productive at the end of ten years as they were when first in full bearing.

NAMES OF PLANTS (Stoke Newington).—1. *Sempervivum tectorum*. 2. *Plumbago Larpentæ*. 3. *Linaria cymbalaria*. 4. We cannot name Peas unless they have pods on them. 5. *Lathyrus azureus*. 6. Appears to be nothing more than a diminutive *Lathyrus pratensis*. 7. *Tetragonobolus edulis*, the Winged Pea. (*A Constant Reader*).—*Lilium chalcidonicum*, or Scarlet Martagon Lily. (*R. W.*)—The yellow flower is very scarce, it is *Linaria vulgaris var. piloria*, or Regular-flowered Toad-flax, having five spurs instead. A friend would be glad of a plant. The other plants are *Salvia Grahamii* and Common Rosemary. (*C. B. S., Jersey*).—Your Fern is not *Asplenium fontanum*. (*Delta*).—Your flowers are *Delphinium chinense*. No. 1 is only a variety with larger flowers. Send four stamps to our present office, with your proper address, and we promise that now there will be none of the mistakes you mention. (*Ayrshire*).—Your plant is the old white *Veratrum*, *Veratrum album*. (*R. W.*)—It was *Hoya carnososa*; we do not think it would thrive in a room-window.

NOSEGAYS AND BOUQUETS (A New Subscriber).—If you buy our numbers 311, 331, and 345, you will find all the information we can give.

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WEEKLY CALENDAR.

D M	D W	AUG. 28—SEPT. 3, 1855.	WEATHER NEAR LONDON IN 1853.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in Inches.						
28	Tu	Small Heath.	30.438—30.425	82—50	N.	—	7 a 5	55 a 6	7 a 47	16	1 11	240
29	W	Wall.	30.432—30.319	84—45	W.	—	9	53	8 0	17	0 54	241
30	Th	Speckled Wood.	30.252—30.127	84—54	W.	—	10	51	8 15	18	0 36	242
31	F	Brown Hair-streak.	30.260—30.157	73—40	N.E.	—	12	49	8 31	19	0 18	243
1	S	White C. Moth.	30.314—30.274	72—39	E.	—	14	47	8 49	20	0 1	244
2	SUN	13 SUNDAY AFTER TRINITY.	30.353—30.339	74—37	E.	—	15	45	9 13	21	0 20	245
3	M	Poplar Hawk Moth.	30.333—30.282	78—37	E.	—	17	42	9 43	☺	0 39	246

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 70.8°, and 49.1°, respectively. The greatest heat, 85°, occurred on the 1st, in 1843; and the lowest cold, 32°, on the 29th, in 1850. During the period 119 days were fine, and on 77 rain fell.

ASPLE'NIUM LANCEOLA'TUM.



IN English this has been called *Spear-shaped Spleenwort*, *Lanceolate Spleenwort*, and *White Oak Fern*.

The main body of the *root* is black, tufted, and covered with bristle-like scales; the rootlets are also black and numerous. The *stem*, or *stipe*, of each frond, up to where the leaflets commence, is purplish-black, and throughout its entire length is more or less sprinkled with fine, bristly scales. The length of the fronds varies as much as from three to fifteen inches. Mr. Moore says they are sometimes eighteen inches. They attain the greatest height when favourably cultivated under shade in a warm greenhouse. The specimen from which our drawing was taken is six inches high. The outline of the entire leafy portion of each frond is spear-head shaped, or lanceolate, to which the specific name alludes. The upper half of each stem and the leaflets are very bright, pale green. The spear-head shape of the frond is caused by the lowest leaflets being shorter than those immediately above them, and then the upper leaflets again gradually diminish in size. The *leaflets* have a triangular, or arrow-head outline, and though sometimes in opposite pairs, yet they are generally alternate; they for the most part stand at a right angle with the stalk, but sometimes droop slightly. The *leaflets* are reversed-egg-shaped,

blunt at the upper end, but deeply, and sharply-toothed, the teeth being as fine as bristles; the leaflets at their lower end taper off gradually into a fine foot-stalk; they have a slightly twisted mid-vein, from which proceed forked side-veins, one to each division between the teeth. The *fructification*, or *sori*, is in irregular-placed masses, several on each leaflet, at first longish oval in form, but gradually running together, and spreading over nearly the whole leaflet, and becoming of a rusty brown; the cover or membrane (*indusium*) is oblong, whitish, with a jagged margin, always separating at the side towards the mid-vein. The *spores*, or seeds, are ripe in August and early in September.

This species is found in the crevices of rocks and on old walls in the south of England. Upon rocks on the north side of the Isle of Jersey, and other parts of the Channel Islands; about St. Ives and other places in Cornwall; at Tonbridge Wells and its vicinity; and in a few places in Oxfordshire, Devon, Gloucestershire, Sussex, Somerset, Carnarvonshire, Denbighshire, Glamorganshire, Merionethshire, and Pembrokeshire. Mr. Bolton states that he found it on a wall in a village near the river Wharf in Yorkshire, and Link says it occurs near Gilphead, in west Scotland, and in Ireland, but these localities require confirmation. Mr. Sweet, in his "*Bristol Flora*," says it occurs there in "*Oldbury Court Woods*, and in lanes about Stapleton. The area of this plant is not more than half-a-mile, occurring on the Old Red-Sandstone."

Sometimes the outline of the frond becomes almost triangular, the lowest leaflets being the longest, and it is then very much resembling *Asplenium adiantum-nigrum*, so much so, that Mr. Bolton thought it only a variety, but from this species it is always to be distinguished by the form and position of the fructification.

The first author we find mentioning the *Asplenium lanceolatum*, is Lyte, in his translation of Dodoen's Herbal, published in 1578, if it is what he there calls *Dryopteris candida*, or White Oak Fern; and if so, Lyte adds—"Mathiolus and Ruellius, both men of great knowledge, do call it in Latin, *Osmunda*. Wherefore we, considering the property of this herb in taking away hair, do think good to name this herb in our language, *Osmund Baldpate*, or *Pilled Osmund*"—to *pill* being an old word for *to rob*. We are not certain that either Lyte, or Johnson (the editor of Gerarde), or Parkinson, really alluded to this species of *Asplenium* under the title of *Dryopteris candida*, but we bow to

the judgment of the late Sir J. E. Smith, who so states in his "English Flora," iv. 298.

It was not until the second edition of Ray's "Synopsis Stirpium Britannicarum" appeared, in 1696, that this Fern was announced as a native of the British dominions, for it is there stated that Dr. Sherard had found it "on the rocks on the north side of the Isle of Jersey." In 1724, in the third edition of the same work, its discovery in England was first noticed. "Mr. Bobart having found it in the north porch of the church at Adderbury, in Oxfordshire. Dr. Woodward found it also in England."

Although an English Fern, it is of a delicate habit, and only grows wild in peculiarly-sheltered, well-drained, yet moist situations. It grows well in a warm greenhouse, shaded from the sun, and kept moderately moist. Its stature is then much increased, and the brightness of its evergreen verdure is intense. The best soil for it is a mixture of peat, limy rubbish, bricks broken as small as filberts, and leaf-mould, in equal proportions; the pot it grows in being filled one-fourth with broken crocks for drainage. It may be propagated by division in April, but every piece separated must have a crown. It will not bear the close, damp air of a Wardian case.

THE August Meeting of the *Entomological Society* was held on the 6th inst., John Curtis, Esq., F.L.S., the President, being in the chair. In addition to the usual donations of books and periodicals, a valuable collection of Indian insects, of all orders, was presented by Major Hamilton, and a number of rare British ground Beetles (*Carabidæ*), by the Rev. Hamlet Clark.

The Secretary announced that a requisition had been presented to the President and Council, calling for a revision and settlement of the By-laws respecting the admission of Associates, a subject which for some time past has disturbed the society.

M. Pictet, of Geneva, a distinguished entomologist and palæontologist, and the author of several fine monographs on the *Perlidæ*, *Ephemeridæ*, and *Phryganeidæ*, was elected a honorary foreign member in the stead of the late Dr. De Haan, of Leyden.

The Secretary gave notice that a new part of the Transactions was ready for delivery, containing, in addition to the official report of the Meetings, papers by Mr. F. Smith, on Brazilian Ants; by Mr. Baily, on Australian Chrysomelidæ; by Mr. Westwood, on exotic Stag Beetles; and by Mr. Desborough, a continuation of his researches on the Economy of the Hive Bee.

As usual at this season of the year, the exhibitions of rare insects recently captured were very numerous. By Dr. Power, many of our rarest Coleoptera, including *Agrilus chryseis*, *Anthaxia nitidula*, *Rhyncolus ater*, *Microrhagus pygmaeus* and *Drypta emarginata*, chiefly from the New Forest, Hants.

By Mr. F. Bond, *Pionea margaritalis*, *Nascia ciliaris*, *Opadia funebrana*, and other rare Moths, from the fens of Huntingdonshire.

By Mr. Baily, the rare *Cryptocephalus nileus*, beaten from an Ash-tree, at Cobham, Kent.

By Mr. H. Doubleday, specimens of *Caradrina blanda*, and *alsines*, two distinct species of *Noctuidæ*, usually confounded together in collections under the former name.

By Mr. Weir, specimens of *Penthina sauciana*, reared from *Vaccinium Myrtillus*, and *Anarsia Genistæ*, reared from *Genista tinctoria*; also an *Anthrocera filipendulæ*, with only five red spots (instead of six) on each of the fore wings, coupled with a female with the ordinary markings.

By Mr. Douglas, *Trochilium chrysidiforme*, taken near Dover, thus proving the indigenous character of the species, which had been doubted, in consequence of Mr. Curtis's specimen having so long remained unique; also *Asychnia aratella*, from Darenth, and *Butalis fuscoanea*, from Headley.

By Mr. Dutton, a box of rare Lepidoptera from the Isle of Wight and the New Forest, including the dark greyish variety of the female of *Argynnis paphia*, and *Agiotis lunigera*.

By Mr. Foxcroft, a variety of rare insects from Perthshire, including a dark variety of *Polia occulta*, which had been reared in some quantity from Caterpillars, which differed so much from the ordinary individuals as to have led Mr. Logan to consider them as a distinct species peculiar to Scotland.

Mr. Samuel Stevens exhibited a magnificent new species of Butterfly, sent from Villa Nova, in Brazil, by Mr. Bates, belonging to the genus *Agrias*. Mr. Stevens also alluded to the extraordinary profusion in which, notwithstanding the severe winter, insects had appeared during the present year. A few evenings previously, on Mickleham Downs, the Moths were flying in swarms. The same remark was made by other members; and Mr. Westwood stated, that during the past month he had observed two natural substitutes for the sugaring process employed by lepidopterists. A large bed of Beans, in his garden, had been much infested with Aphides, the secretion from which, so much relished by Ants, had attracted Moths in great numbers at dusk. He had also observed that they were equally attracted by Gooseberries which had become cracked owing to the rain storms in the middle of the month of July.

Mr. Westwood also exhibited a living *Scorpion*, which had been imported among plants from Mexico, by the Horticultural Society; also specimens of the eggs and larvæ of the *Dog Flea*, stating, that having furnished a number of the latter, as well as of the perfect insects, alive, to Mr. Haliday, that gentleman had investigated their internal anatomy, with a view to the determination of the question, whether the genus *Pulex* constituted a distinct order (which had been named *Aphaniptera*, by Messrs. Kirby and Spence), or whether it formed a portion of the order Diptera, as had been supposed by some recent entomologists; he believed that Mr. Haliday's researches fully confirmed the former of these opinions. He also stated, that the eggs were deposited singly, and loosely, and were not affixed

by a glutinous secretion to adjoining substances, as had been asserted. He also exhibited specimens of both sexes of the *Saturnia Cynthia*, received from Major Jenkins, the species which produces the Eria silk, famous throughout India, and for the cultivation of which article specimens said to be of this species had been imported into Malta and the South of Europe, together with specimens of both sexes of the insects reared in Malta, received from Dr. Templeton. Dr. Boisduval had recently described the individuals reared in the South of Europe as a distinct species, under the name of *S. Ricini*, but Mr. Westwood thought there were not sufficient reasons for such a step, and argued—from the known modifications which occur in the races of the common Silk Moth, as well as in the *Saturnia Paphia* (which produces the Tusseh silk of India), and, in fact, from the analogy of domesticated animals in general—that if the progeny of a single pair of *S. Cynthia* were widely distributed, and treated differently, in three or four generations as much difference would be perceptible among them as between these two so-called species.

A FEW WORDS ABOUT ROSE CULTURE.

FOUR things, at least, are absolutely essential in high Rose culture:—a *rich and deep soil*; *judicious pruning*; *freedom from Insects*; and *watering when requisite*. If any one of these are allowed to be wrong, the success will be in proportion incomplete.

Soil, of course, is of the utmost importance; indeed, unless this be of a generous character, all other appliances will be rendered nugatory. What is termed a sound loam they all delight in; but it may be used in varying proportions in the compost, according to the class or kind it is required for. I am of opinion, that the arguments which I have always used for Pears on the Quince Stock apply equally here: the soil should be adapted to the stock rather than the scion, or kind worked on it. The common, or Dog Rose stock, is known to thrive best in strong, loamy soils; and we have thousands around us here luxuriating in a soil within a few grades of a real clay. It is, indeed, on such soils, and in half-shaded situations, by the side of pits containing water constantly, that I have known them make the most luxuriant shoots—not unfrequently, ten or twelve feet in a season. Here, of course, there is no manure; simply organic matter; and if it be wondered at that cultivated Roses require so much manure, the answer may be found in the fact that they have more hard work to do; their amount of blossom, if weight might be suffered as a test, would, in most cases, doubly and trebly exceed that of the Dog Rose; added to which, they have less foliage.

Roses on their own roots require that the soil be modified according to kind; that is to say, we should not use so adhesive a soil to a Tea or Bourbon Rose as to ordinary kinds. Whatever loam be used, it is well that it contains as much organic matter as possible. Depth of soil is of great importance to all kinds: it is the deeper series of fibres, situated in a proper medium, that sustains a good succession of flowers, in defiance of heat and drought.

Judicious pruning is of eminent service; by this the operator is enabled to reduce the extravagant growths of over-rampant kinds, and to increase the energies of those which are of a more delicate constitution. By it, also, the trees or bushes are relieved of superfluous

shoots and useless wood, which otherwise would crowd up the interior; the whole outline, too, is reduced annually to a compact or consistent form.

We come, now, to the third consideration, viz., *freedom from insects*. Who could ever thoroughly enjoy and admire a Rose-tree clogged with Aphides? or what lady would select such for her bouquet? But this is not all; the constitution of the tree becomes seriously injured, and its energies as to the future year considerably narrowed by their ravages. As to the destruction of this numerous family, it can but proceed upon the same basis as that I have ever insisted upon for the Peach and Nectarine, viz., to proceed against them betimes; indeed, may we not say the same as to all garden depredators? We all know that tobacco will destroy them, but it is somewhat costly, when used to any extent. I happened to call on a gardener of long practice in his profession, this summer, and could but admire the perfect cleanliness of his Roses. I, of course, "compared notes," as to the means employed, and was rather surprised, on being informed that he used nothing but clear water, which, he said, he bathed them with mostly, twice a-day, by means of a barrow-engine. His Roses were, certainly, unsullied by insects, and he appeared a man of veracity and observation. But here, again, the labour question comes into view—one hour in the morning, and another in the evening, for two or three weeks during the busiest period of the year, will be of more value, possibly, than the tobacco, which completes the affair at one application, if well done.

The last main point I adverted to—was *watering when requisite*. Not a few of the evils which beset the Roses are traceable to the sufferings they undergo in hot and dry periods, if neglected in this respect. I am of opinion that that sad pest, the Rose fungus, that rusty spot, which sometimes so disfigures the foliage, is much increased, if not originated, through drought. Most of these fungi revel on the remains of vegetables, in a sickly, fading, or decomposing condition. The Rose-leaf, if ill supported by the ascending sap, through lack of moisture, assumes, of course, a faded condition; and, indeed, the first stage of decay may be said to have already commenced. But the gross vegetation of the Dog Rose escapes it.

Before quitting this subject, I must beg to offer some remarks on Rose-stocks, cuttings, &c. I am not in a position to offer extensive experience as to the comparative value of the Dog Rose, and the Manetti stocks; these two being, at present, the chief competitors for the honour of carrying on noble and high-born Roses; all I can say at present is, no Manettis for me; they produce too many suckers. But I wish to point to one error, as I conceive, in stock management. Everybody desires a good, strong stem to carry a large Rose head. Now, the question is, how to obtain it. I have seen budded Dog Rose stocks so strong as to support themselves without staking. This is most desirable. We all know, that if we plant stocks in the autumn, or early spring, on good soil, that they produce, under proper conditions as to moisture, &c., not only branches at the head, but abundance of side branches. I believe it is a common practice to strip these clear away. Now, if instead of cutting them clear away, they were merely pinched back to a couple of eyes in June, they would have the means of giving strength and consistency to the stem. And if these snags, or spurs, were left on them through a second season, and taken away progressively during the summer, beginning at the bottom, and finishing this stem-stripping process by the beginning of August, I am prepared to contend, that the stems would be double the strength of those totally stripped at once, as is too often the case.

I spoke of propagation by cuttings, and we all know that they may be struck at various periods through the

summer. But give me the end of June for this proceeding, and a little bottom-heat, such as country folks put together for a summer Cucumber-bed.

I had two frames thus put up about that time. They are close at the back of a wall, on the north side of it; their front to the wall. A bottom-heat of leaves and grass, intended to sustain 70° to 75° permanently, was the intention, and it has been well carried-out. Many hundreds of cuttings of the superior kinds were dibbled on these beds like Cabbage plants, as thick as they could stand together; the beds being soiled over four inches for that purpose. These cuttings are now nearly all rooted and growing, and this in the middle of August; and if I chose, I could, by coaxing them, and pinching now and then, cause them to become nice little bushes by the autumn.

One more matter I may allude to: the subsoil beneath Rose-trees. Although I strongly advocated watering with a liberal hand when necessary, and this is not unfrequent, I must observe that Roses abhor stagnation of moisture. Therefore, in preparing stations for them, care should be taken to secure drainage below. Liquid-manure I consider indispensable, in order to sustain the perpetual character when they are hard-worked. I find guano-water excellent: say two ounces to a gallon of water once-a-week.

R. ERRINGTON.

THE CATTAWISSA RASPBERRY.—The Cattawissa Raspberry is an American variety entirely new and distinct in its characteristics, in respect to its manner of bearing and the period of maturing its fruit, which promise to make it an object of general cultivation. From its appearance and mode of growth, I have no doubt but it is a seedling produced from the common wild Blackberry of the country, which grows in great abundance about the region where it originated; although I cannot learn that any other varieties, native or foreign, wild or cultivated, ever grew near the original plant, except, perhaps, the thimbleberry (*Rubus purpurea* v. *odorata*), which, from the dissimilarity of the two, could have had nothing to do with its production.

This bountiful gift of nature originated in the graveyard of the little Quaker Meeting House in the village of Cattawissa, Columbia Co., Penn., situated near the confluence of a stream of the same name with that noble river, the Susquehanna. The history of its discovery is simply as follows:—The person who had charge of the Meeting House, from whose own lips I received the account, was in the habit of mowing the grass in the grave-yard several times in the course of the year, and on one occasion, some eight or ten years since, observed that a brier, which he had so often clipped with his scythe, showed symptoms of bearing fruit out of the ordinary season. For this time he spared the plant, bestowing upon it his watchful care, and afterwards removed it to his own humble cottage, to be fostered and cherished, no more to “waste its sweetness on the desert air.” From a plant that found its way to this district I was struck with its peculiarities, and resolved to devote myself to its cultivation and increase, and am now prepared to describe its properties as far as my opportunities have allowed, after experimenting with it for two years.

The fruit is of medium size, inferior to many of the new popular varieties, but is sufficiently large for all economical purposes. Its colour is a dark reddish-purple when ripe, and of a very high flavour; it bears most abundantly throughout the season, after the young wood, on which it produces its best fruit, attains the height of four to five feet; usually beginning to ripen in August, and sometimes a little sooner. The fruit is produced on branches continually pushing out from all

parts, successively appearing in the various stages of growth, from blossom to perfect maturity, and often there may be counted more than fifty fruits on a single branch. As the ripening progresses the later fruits of each branch gradually become less in size, but there is no suspension of blooming and fruiting until checked by frost. If protected in-doors, it would undoubtedly produce fruit during the winter months.

The great advantage of this fruit over all other varieties of the Raspberry is, that, if the stocks should be accidentally broken or cut off, or should be killed by winter frost, it is all the better for the crop, and if all other fruits should fail from the effects of spring frosts, we should have this to rely upon during the fall months, as its fruit is produced on the shoots made from the ground the same year. Another great advantage is, that, from a small space of a few yards of ground, a daily dessert for a small family would always be at hand during the autumnal months.—JOHN PEIRCE.

[We hope Mr. Peirce's expectations will be fully realised in this Cattawissa Raspberry; time must determine its value. We have entire confidence in his statements, but his experience with it is not quite such as to be conclusive with the public; several instances of supposed perpetual bearers having been found on trial of more than doubtful value. Let us suggest that all new fruits and flowers, candidates for popular favour and high prices, be brought before some competent and disinterested judges, and let them pass judgment upon their merits.—ED.]—*American Horticulturist*.

HARDY ANNUALS FOR FLOWERING IN POTS.

ALL the hardy annuals would flower in pots if any one chose to have them that way, but they will grow with much less trouble without pots. However, there are places and people so circumstanced, that pot-flowers, some sort or other, are more valuable than border flowers, and of all the pot-flowers in the world, none can be had so cheap as annuals. A correspondent, who is aware of all this, but does not know the very best kind of annuals for pots, nor the easiest way to manage them, has just brought the subject before us at the right time.

The best and simplest treatment is certainly to give these hardy annuals their chance out-of-doors during the winter, in the beds or borders where they sow themselves, or where they are sown on purpose, and to have them potted sometime from the middle of February; as the season tells on them, or as they appear to be in active growth again; to use rather large pots for them; to plant several plants in each pot at first; and to thin them out later in the season if they seem too crowded; to have mellow, rich soil for them, and some of it with more sand mixed with it for placing next to the roots as they are being potted. I have done all this repeatedly, many years back, and although I might not take the first prize for annuals at a regular show, I had as fine flowers and as bushy plants as any moderate or sober person need ever wish for. So that without the help of as much glass as would cover the top of the chimney-pot, any man or woman in the kingdom may have a score of beautiful pot-plants in bloom next May, after wintering themselves, for nothing, or next to nothing.

If we rise one degree higher in the scale, and come to the one-light-box possessor, we are just as well off as him for bloom, and early bloom, too, considering all things, and no bother to look after a box or glass; but one more step takes us to where Cinerarias, Calceolarias, Geraniums, and China Primroses can be had in pits, or in the greenhouse, and certainly, with such advantages, no one could grudge them all their flowers; still, without spring annuals, if only half-a-dozen pots of

Nemophila, I always think a greenhouse is too bare of flowers just at that critical time when they are most wanted, or when the *Cinerarias* are getting seedy, and China Primroses are all over, or not much worth looking at, and before the *Calceolarias* and the greenhouse *Geraniums* come in. If you recollect, there always seems a gap at that critical season in the greenhouse, which nothing else would fill up so soon, so simply, and so cheap, as plenty of pot annuals, which might be coming on all the time since they were potted, on a top shelf where nothing else but seedlings and stove pots would grow; for, in garden-talk, pots seem often to grow as well as plants.

If you go to such places as Shrubland Park, or Trentham, it is more than probable that you could hardly find room for such common things as annuals; but, believe me, the owners and their visitors would be only too much delighted to find that their gardeners would be so considerate as to look after such cheap flowers, room or no room. They could move something or other to welcome a cheap edition, or rather the addition of more cheap flowers than the costly things they are in the habit of having at that season. So that there is nothing too common, or betokening stinginess, or of poverty, in having the oldest and simplest plant in the country well-grown and bloomed in a pot; the Queen has them, and the greatest people after her like to see them, and to have them of their own, if their gardeners would but find room for them. Look at the hanging baskets in the Crystal Palace, and say if ever you saw so many of the very commonest plants put together before? Not one of them but the poorest man in the next village might have in his window, and yet all the world admires them; and so they ought, and so would you, or I, if we would but hit on a good blaze of annuals, such as no one else could come up to for that season, at least. It is not that great people do not admire and like these things, but that the fashion compels them to have more costly plants, so that there is no room for such things in their establishments. But surely, that is no reason why you and I should not have them, or that we should be so foolish as to hanker after guinea plants, which are not a bit the better for being the dearer.

I do not recollect a single good writer on gardening and flowers who did not recommend annuals in some way or another, and whole books have been written entirely about them. Mrs. Loudon's beautiful book on annuals is the most comprehensive; but still, I am well aware that many of our best gardeners are very much against annuals, and both sides of the question ought to have a hearing. The said gardeners complain that annuals are "always going off," and that there is a good deal of trouble in finding out other plants to supply their places; all of which is true enough; and a sameness of character prevails in all the flower-gardens managed by such men, no matter how different the sizes. There is no change from the beginning to the end of the season; indeed, I often wonder how some people can enjoy themselves under a routine that never varies through a long succession of years; the old, everlasting dishes are filled with the same things, year after year, and the fewest kinds possible, even for them, just as the shows have reduced the plant collections to the smallest numbers of the easiest plants to grow, so that no room is left for ingenuity in grouping colours, no forethought encouraged to provide for the rainy day, or for a bed of flowers, which is as certain to require a new stock or crop by a certain day, or week, as that the sun will set at such a time on such a day; no experiments to prove whether such-and-such plants could be so improved as to help the flower-garden; nothing, in fact, but the old concern, where the dull routine gets into the brains of a gardener, or when his employers have little taste to spur

him on; and between them they make their gardens often little better in effect than the daubs on the face of a clown or Merry Andrew. How differently are the wits of a man exercised who must have three changes, at least, in one-third of his beds every season, and the changes to differ one season from another. Why, such exercise would make a clever man out of many now in the ranks of the slow-coaches of the olden times, and to help on this cleverness and whitewashing of skulls, there is no tribe of plants better than hardy and half-hardy annuals. I went through the furnace myself, and I know it is just as I say. I began life—garden life—with the idea that nothing was worth living for, in the garden, so much as botanical, rare, and very curious plants, in the greatest possible numbers. Beautiful forms and brilliant colours I did not then dream of, much less of what beautiful combinations could be made out of them. My every plant was to be in its place, and in no other, for years and years, just as regularly as the name of it was in its proper place in the catalogue. But necessity, and the improvement of the times, made me change the tune; and when I did change it, you may believe me, when I tell you how difficult it was to bend the will and the way in a contrary direction, and how often I found myself at my wit's ends before I could hit the mark properly; but I did hit it as hard as I would the Russians, and any one may do the same, and much more, by the same means, and that is simply—common perseverance.

You have only to make up your mind that you will be gayer next spring than any of your neighbours, and more so than ever you were before, and perseverance will do the rest. With the help of such annuals as the following you may have abundance of pot flowers:—

First, let me name *Nemophila insignis*. It is one of the best, if not the very best; and *Nemophila maculata* the next best; and the last week in February is the best time to pot them from the open ground. I have seen them do better that way than from such as were kept in pots all the winter.

After them, and for a change, and also as being rather new, the white *Silene pendula* is as good as any. This one, and *S. compactum*, and another called *regium*, will answer well in pots, and may be put into pots in January, February, and the whole of March; and they will do equally well; but, except the white one, they are not so good as *Collinsia bicolor* and *Gilia tricolor*. I have seen these two annuals grown to such a size, by pot-culture, through the winter, as that few would believe them to be the same plants.

Now, to be up to the spirit of the times, let us say that you have a little wooden box, or basket,—an oyster-barrel would be just the thing, inside a fancy-basket of one's own making. The barrel is to be the pot for holding the *Collinsia*,—a large tuft of it in the middle, and a row of *Nemophila insignis* all round, to hang down outside. This is as pretty a device as you can have, except the *Gilia tricolor* and *Nemophila maculata*, which would be a good match. They would both hang outside the window, and flower for a long time. Even in common pots for a greenhouse, or room, this is extremely pretty; but to show them off in a greenhouse, the pot would need to be raised so as to see the whole of the *Nemophila* hanging round it. There ought to be blocks on purpose to raise certain pots above the rest in all plant-houses, the blocks to be painted dark green.

The *Eschscholtzia* makes one of the best pot plants of all the annuals or common flowers. About the year 1830, and for three or four years after that, you could see it in pots in all places where gay flowers were in demand. Some tying it up straight, and others allowing it to hang over the sides of the pots, and that is the best way.

I never saw *Bartonia aurea* tried in pots, but if it

could be kept sufficiently low, no flower is more beautiful while it lasts. It stands the winter well, and it might easily be proved next spring. I have now the fellow to it in beautiful bloom,—*Microspermum* alias *Eucnide bartonioides*. It deserves more than was said of it last year as a pot annual for the greenhouse or rooms, but it is rather difficult to get up well in the first stage or two. Mr. Walton's new case seems to suit such tender or slender seedlings at first, for his plants of it are now the best I have seen.

The white and purple *Candytuft* make the next best pot-plants; five plants of either of them will make a large mass in a 32-pot, and they improve by using the richest soil for them.

The red or purple *Virginian Stock* is about the first annual to bloom in the spring. The way to have it in pots is to take up little lumps of soil, or balls, and the more of them which you can put into a pot the better it looks. I once saw, more than twenty years ago, at least a dozen of pots of it taken up in February when it was coming into flower, and they lasted in the greenhouse till the end of May as gay as any plants we had. They were allowed to hang over the pots, and they were so thick together that they seemed to live entirely on the watering. The white *Virginian Stock* makes no show in a pot, but the red one is capital that way.

For those who have the convenience of keeping annuals in pots over winter, there are none better than the different kinds of *Schizanthus*, particularly *Schizanthus Hookeri* and *violaceus*, which are better than *pinnatus* for pots, but are of the same habit.

The *Clarkias* do not make nice pot-plants, it being difficult to keep them from being too long in the legs; but the *Clarkia*-like plant, *Eucaridium grandiflorum*, makes one of the very best pot-plants, even better than in the open ground, and it stands the winter, and it may be potted as thickly as the *Virginian Stock*.

Godetia rubicunda and *G. Lindlyana* are very beautiful in pots; but, like the *Clarkias*, they soon get too leggy, and it is only where there is a collection of plants that they come in useful like the old-fashioned *Chrysanthemums*, their bottoms could then be hid with taller plants.

Viscaria oculata was exhibited as a pot plant only a few years back, and beautiful bushy plants of it they used to exhibit. This, however, requires a very dry, airy place to winter in, and is the last of those hardy annuals that I recommend for sowing now to stand out during the winter, and to come in for potting in the spring.

There are many more kinds; but one hardly knows what to say about them, as very few persons have ever tried them that way; and although they may do for patches, or even for whole beds out-of-doors, late in the spring, I am not aware that they are suitable for being removed into pots; but those that I have mentioned, I have either grown in pots myself, or have seen them with others so good, that I am sure of their usefulness, their gayness, and the ease and simplicity of this way of treating them.

D. BEATON.

PAINT FOR BARNs.—The following mixtures are given in Wheeler's new and useful (American) work, entitled "Homes for the People," from which some valuable hints may be derived in forming desirable tints:—

A cool grey, similar to what would be the tint of unpainted timber after a few years, may be obtained as follows:—

Indian Red, half-a-pound;

Lamp Black, three ounces;

Raw Umber, half-a-pound, mixed with one hundred pounds of White Lead.

This colour will be changed by the addition of sand, which in all cases is recommended, in a proportion of

about one quart to every one hundred pounds of mixed colour. The finest and whitest sand that the neighbourhood affords should be used, and as its hue differs so will the tint of the paint be changed.

This colour, with one-third less white, is very suitable for wooden roofs, and is a cool, unreflecting grey tint of great softness and beauty.

Cream colour, No. 1.—A soft pleasant tint like that of coffee greatly diluted with milk, is oftentimes well adapted to a building, particularly in regions where red sand stone or other similar objects, with such local colouring, give a brown hue to portions of the landscape.

It may be mixed as follows:—

Yellow Ochre, five pounds;

Burnt Umber, half-a-pound;

Indian Red, quarter-of-a-pound;

Chrome Yellow, No. 1, half-a-pound, with one hundred pounds of White Lead.

The key notes in this colour are the Indian Red and the Chrome Yellow, and the tone may be brightened or lowered by more or less of either, as individual taste may prefer.

No. 2.—A still more delicate tint, resembling the pure colour of the Caen stone, and well adapted for a large building with many beaks of outlines, may be mixed thus:—

Yellow Ochre, two pounds;

Vandyke Brown, quarter-of-a-pound;

Indian Red, quarter-of-a-pound;

Chrome Yellow, No. 1, half-a-pound to every one hundred pounds of Lead.

DESULTORY NOTES.

EDGINGS FOR WALKS AND BORDERS.

MR. BEATON struck a welcome note on this subject the other week. There can be no question as to the trouble and expense of narrow grass edgings. I should never like to see them narrower than from fifteen to twenty-four inches, and if wider, all the better. Jobbing gardeners will owe our friend a quantity of thanks. There is nothing that small proprietors grudge more than the keeping of such edgings, and the truly industrious man is very apt to be considered a nick-nack trifle. Some time ago, a gentleman sent me the length and width of such edgings he possessed, duly reckoned up into so many square yards, and the, to him, unconscionable time taken up in their management. He was no stranger to many gardening operations, and had even handled a scythe in his younger days; so I advised him to try a dozen of yards, and the result was that the gardener was praised, instead of blamed. I am at present alluding to edgings for pleasure-grounds; for kitchen-gardens nothing beats tiles, stones, and slates, the last being neatest and best, though Box-edgings, cut twice a year, look well. In the case referred to above, as well as that of many others, I have recommended, and seen introduced, verges of Box, of Ivy, and the smaller Periwinkles. These all do admirably in roughish, wild scenery, or where the opposite side is not bounded by a fine kept lawn. In such a position, notwithstanding its expense, something more than mere prejudice would seem to advise the grass verge. I have never seen the Berberry tried, but I have no doubt it would answer well. Frequently, long lengths of these troublesome grass verges are to be found bounding the sides of walks, with shrubberies on each side; and in such cases, all such edgings as Berberry, Ivy, &c., would be more appropriate than grass, and cost nothing in comparison in keeping. In very many cases, such shrubberies would be improved, if, instead of a narrow raked border, the Ivy, &c., was allowed to go right up to the shrubs, and thus produce a green carpet of uneven breadth as the shrubs approached and receded from the walk.

I hardly think I should have alluded to this subject, if a gallant Admiral, lately returned from Paris, had not

expressed to me such high eulogiums on the beautiful Ivy verges to the beds of flowers in the gardens of the Louvre. These verges would appear to range from two to four feet in width, and separated the beds of flowers from the surrounding gravel. The Admiral told me that all the world, and especially the English portion of it, were full to overflowing about the beauty of these green verges of Ivy; and that if I did not do something in the same way with Ivy, I should be behind everybody. The Ivy was taken every care of, and not a leaf allowed to remain out of place. The kind used was called the Irish Ivy; but for our moister climate, some of the smaller-leaved kinds would be more appropriate. In the clear, dry atmosphere of Paris, where a green, carpeted lawn would be a rarity in the dog-days, these Ivy verges may be more striking here than with us; though here they would always be pleasing. Every case I recollect of seeing Ivy and flowers associated, the effect was agreeable. I have seen hundreds of ladies admiring, and investigating the *modus operandi* of hillocks, or baskets of flowers, formed simply by driving rough pieces of wood into the ground, covering them with Ivy, and filling the space within with earth and plants, having some of the outside rows of the latter of such a character as to interlace a little with and fall over the Ivy. At — Busk's, Esq., near Codicote, Welwyn, I lately saw a nice Ivy basket on the lawn. Originally, a basket had been made, with one central stem to support it, and against this Ivy had been planted, trained up and round the basket. The original basket has long been gone, but the Ivy retains the shape, and bears, without flinching, the weight of the earth and plants. The diameter of the basket being, so far as I recollect, something about four feet.

Some gentlemen, when a wide verge of Box has been alluded to as a substitute for grass, have shrugged their shoulders; not merely at the first expense, but as a leaping out of the frying-pan into the fire principle, merely from the labour of scissor-clipping alone. Now, for such verges, I would as soon employ a bevy of grass-hoppers as the paraphernalia of horizontal scissors, level stakes, and lines. Many labourers would dress the Box in a kitchen-garden, sides and top and all, while a particular clever fellow was getting his lines and scissors in clipping order. For such broad verges, the man who can make a scythe tolerably sharp, and keep a stiff wrist at the handle, will find no difficulty in shaving it as level as he would do a piece of lawn.

In the neighbourhood of well-kept lawns, I fear there will be more than a prejudice for grass verges. The trouble and expense they occasion are unquestionable; but a lawn of any size is also an expensive affair. To keep it in first-rate order will require rolling and mowing once a week. An extensive lawn is often, to the gardener, an extensive annoyance. If his employers are constantly at home, kept nice it *must* be, however other things may come in with short attentions. If ever I feel a spice of envy, it is when I walk over a snug little place where the lawn is of the smallest possible dimensions. The troubles of flower-beds and cropped kitchen quarters are a mere bagatelle to the ever-present and never-seen work of a lawn. I say *never seen*, because few of the gentry like to walk much about until the whole of the grass is swept up and gone. Beautiful though it may look to-day, an equal amount of labour must be spent to cause it to look as well eight days hence; *as well*, not a bit better. In a flower-group, there is not only far less labour, but there are continual changes to please and delight. In the kitchen-garden, there is the produce to be seen and realised, as the result of labour. To the uninitiated, the soft Turkey-carpeted lawn is a rich luxury; to the gardener, with limited labour power, it is a fathomless abyss that threatens to swallow up everything else, and yet cry for more. I

have known instances of reductions telling upon kitchen-gardens and flower-beds. I would sooner let a part of large lawns go comfortably "*to grass*." A neglected kitchen-garden, even for a year or two, will entail additional labour for many years to come. A lawn from which hay is taken will get round in a season or two.

MOWING MACHINES.

The mowing machines have lessened the expense of lawns. Where horse-machines can be used, as at Kew, or on the large expanse of turf at Luton Hoo, the expense must be greatly diminished. Even the small hand-machines, held by one man and drawn by another, are a great saving of labour; and, provided the ground is free from hollows, such small ones can go round and between beds in a way that no scythe can do. For verges, the small machines are also most useful. You get rid of the "*dod-doding*" of the mowing and the sweeping; the grass is cut and thrown into the box, nearly as fast as two men can walk. It is hard, however, to satisfy people. Numerous inquiries have been put to me,—where they could get "a machine that *one* man could work?"—and if any advertisements representing single-handed machines are to be depended on?" All I can say is, that I should not like to work the smallest I have seen; and the smaller they are, from the thinness of the knives, the more liable are they to get out of order. To cut well and regularly, the holder must get into the knack of regulating with a firm wrist, and that will prevent him putting forth great pushing power. I have little faith in any machine that does not require the assistance of a man or a stout boy to draw. When two men work such a hand-machine on a lawn, or among beds, great relief is obtained by their changing places. When the grass is dry, and other things favourable, two men will thus mow more of a lawn than six men with their scythes and brooms; and, on verges, they would do very much more.

A gentleman, some time ago, told me that he thus managed the mowing of his verges cleverly; but there was still a vast amount of annoyance with the clipping and the getting up of the grass on the sides, it got so entangled among the little stones and the worm casts, &c. As I expected, the walk was a regular rounded one; high crown and low ditch-like sides, on which, if two people walked abreast, they would experience something of the high-leg or low-leg sensation the landsman feels when he strides along the deck of a vessel having one of its sides well elevated and the other side touching the waves. The walk was levelled, so as to bring the sides within an inch of the top of the verge. The border-side was also elevated in a similar manner. This permitted of the verge being mowed several times, without cutting the sides with the scissors; as when the grass grew two or three inches over the walk, so little was the walk beneath it, as to seem like a mere widening of the verge. This was a gain so far, but not quite sufficient. The length of the grass, when cut, permitted of its being easily gathered up by hand in a basket. Still, a few blades would escape, and there was no getting them out of the shingly gravel, of which the walks were composed. To solidify that gravel, it was firmly rolled, watered with thickish clay-water near the sides, rolled again, and daubed over with sharpish sand, and rolled again; and since then there has been no difficulty, except from a number of worm heaps which were stopped first by lime-water, and then by salt thrown along the sides. The sides of the walk thus being very smooth, there is no difficulty in getting up every stray blade of grass, either by means of a hair-broom, or a fine birch-broom that has lain in water twenty-four hours before using, so as to render it pliant and soft. Without such contrivances, a man must, indeed, have

a huge stock of patience to go on whipping up blade after blade of grass from among loose stones, and preserve his equanimity unruffled.

I fear I may have been trespassing in introducing these remarks; but a lady informed me, the other day, that such simple affairs as we were apt to overlook, were of great importance to those proprietors of small places who wished to make the most of them; * and I shall easily be forgiven by our friend, Mr. Beaton, when I tell him that this very day I have had a basketful gathered of the seeds of the Berberry, as I can see it will be most useful as an edging in many places, and also for giving a more artistic character to beds, when it shall be deemed advisable to give them elevated and wide evergreen margins.

R. FISH.

TRANSMISSION OF NEWSPAPERS TO BRITISH COLONIES AND FOREIGN COUNTRIES.—We have been requested by the authorities of the General Post Office to publish the following official notice:—

"Henceforth it will not be necessary that Newspapers sent abroad, whether to the British Colonies or to Foreign Countries, should bear the Impressed Stamp (the old Newspaper Stamp); but, as at present, a Postage of One Penny must be prepaid (either by means of a Postage Label or in Money) on every Newspaper sent to a British Colony, with the additional Postage (according to the Table in Instructions No. 45†), when the Newspaper passes through a Foreign Country.

"The Postage on Newspapers to Foreign Countries remains the same as given in Instructions No. 45; but, as already stated, it is no longer necessary that the Newspaper should bear the Impressed Stamp.

"In future the Impressed Stamp will be required only in cases of repeated transmission of the same Newspaper in this country, though it will of course be available also for single transmission in this Country.

"In the transmission of Newspapers abroad (whether to the Colonies or Foreign Countries), the use of the Impressed Stamp will entirely cease; it will neither be required nor will it count as Postage, as it will be presumed that where it is employed, it has already served for the transmission of the Newspaper in the United Kingdom.

"From these Regulations it will necessarily follow—

"1st. That every Newspaper going abroad must hereafter have the Postage to which it is liable represented by adhesive Postage Stamps, or paid in Money.

"2nd. That a Newspaper, whether published with or without the Impressed Stamp, will be placed in the same position for transmission abroad.

"3rd. That the Impressed Stamp will hereafter apply only to transmission and retransmission within the United Kingdom.

"ROWLAND HILL, *Secretary.*"

SCRAPS FROM MY NOTE-BOOK.

JOSLING'S ST. ALBAN'S GRAPE.

EVERY one that has grown this Grape acknowledges that it is of a most exquisite flavour when perfectly ripe; but many say it cracks and bursts, so that it is useless. Now, if a remedy can be pointed out to prevent this unfortunate propensity it will rescue an excellent fruit from neglect. The cause of the berries cracking is a too liberal supply of moisture at the root, and also in the

air of the house, combined with a too high temperature. Thick-skinned Grapes, such as the *Muscat*, *Syrian*, and the *Barbarossa*, will bear a damp, high temperature without any amount of injury. A low, damp atmosphere will, on the contrary, be equally injurious to any kind of Grape, by causing mouldiness on the outside of the fruit, and quickly rotting it. Hence, all good Grape-growers keep the atmosphere of the Vinery as dry as possible after the ripening process has commenced. The *Josling's St. Alban's* Grape requires not only a dry atmosphere, but also a less supply of water at the root. To ripen it to perfection, without bursting, the best method is that adopted by my neighbour, Mr. Constantine, and that is, to grow it in pots. I mentioned and described, lately, his method of training his pot Vines as bushes. The *St. Alban's* variety was treated so; but less water was given this variety than any other. His pot Vines were grown in the Vinery under the shade of those on the rafters, and that shade, I have no doubt, was another cause of this variety not bursting its berries. When I saw them they were quite ripe, and not one berry in a hundred had cracked. They stood on the floor of the house, where the heat was more regular, night and day, than on the rafters; the roots, too, were as nearly as possible as warm as the tops; hence, root-action and leaf-action were nearly assimilated without any great sudden changes by the rays of the sun. This example is conclusive that this good Grape may be grown to perfection by any one that has a Vinery. At the same time, I must not forget to mention, that whilst the fruit was ripening every care was taken to keep the air as dry as possible. No plants requiring water were allowed to remain in the house, excepting the Vines in pots, and they had no more given them than was absolutely necessary to keep the plants growing sufficiently to swell off the fruit.

MILDEW ON THE VINE.

Any remarks on this direful disease will be read with avidity. Every one that has been plagued with it, and every one that has not, will be glad to hear of a remedy. The former, that he may prevent its reappearance; and the latter, that he may be prepared for it if it should visit his Grapes. I was at Sion House, to-day, and saw a remedy, or rather a preventive, adopted against the mildew. Mr. Iveson, unfortunately, was not at home; but his foreman, Mr. Plimley, said they had read some remarks by a Frenchman, to the effect, that if the branches of the Vines were trained close to the ground the mildew would not attack them. Now, at Sion, they cultivate their Vines to fruit in pots in wide pits. In those pits, in early spring, they force Kidney Beans and Strawberries. As soon as these are gathered, the pits are used to bring on young Vines in pots to fruit in those pots the following season. Acting upon the Frenchman's ideas, this year the Vines are allowed, or rather trained (from the pots placed in front of the pits) close to the soil left in purposely. Healthier Vines need not be wished for. There was not a speck of mildew to be seen on either the stems or the leaves, excepting on one close to the end that had by some means or other elevated itself away from the soil. On this the mildew was plainly to be seen. This is exactly the reverse of what might have been expected, and would, I have no doubt, have been found so, but for the fact that the soil in the pits is kept perfectly dry, and plenty of air given to carry off the moisture evaporating from the soil in the pots. The soil, by being so dry, reflects the heat of the sun, and thus ripens the wood better, which ripeness or maturity is always beneficial to the tree, giving a larger amount of vigour, and a greater power to produce healthy, clean foliage and sound fruit the following season. I always had an opinion that mildew was caused, or, at least, en-

* The lady was quite right; and we wish that all our friends would make "a note on't."—ED. C. G.

† This table allows a paper to be fifteen days old at the time of being posted; and fixes the rate of postage, varying from 1d. to 3d., for their transmission to our Colonies.

couraged to spread by an excess of moisture in the air, combined with imperfectly-ripened wood made the previous year. Wherever I have seen the mildew prevail most in hothouses, it has been where great numbers of plants were grown in the same house. The moisture arising from the necessary waterings caused the mildew to spread rapidly—hence, it is always desirable to have as few plants as possible in the Vinery, and to have during the day, especially early in the morning, a free circulation of air to carry off damps. With the Vines on rafters, we cannot apply Mr. Iveson's method of laying the young shoots on the soil; but for such as are grown in pots, it is, I truly believe, a most excellent way of keeping off mildew, growing the Vines well, and thoroughly ripening the wood. Let every cultivator of Vines in pots that has a wide pit give it a trial. I think he will be satisfied with the result.

ARTOCARPUS INCISA (CUT-LEAVED ARTOCARPUS).

This is the famous Bread-fruit-tree of the South Sea Islands. It grows twenty feet high; has large, deeply-cut, evergreen leaves, and produces separate male and female flowers on the same tree. All plants producing such flowers on the same individual are classed together by the celebrated Linnæus in his 21st class—*Monœcia*, *monos* one, *oikos* house, both sexes on one plant, or house. Of this peculiar class the Cucumber and Melon are familiar examples to every gardener. The reason why I bring this useful tree just now under the notice of our readers is, because it is now producing male blossoms on a tree in the Tropical Fruit-house at Sion, near Isleworth, the seat of the Duke of Northumberland, a place famous for the finest collection of exotic fruits, perhaps, in Europe.

The blossoms are produced towards the ends of the branches, one on each. They are very curious, but not showy, having the appearance of enormous catkins, such as we see on the Poplar and Willow, in spring. As far as I could judge for the height, they appeared to be nine inches long, about an inch thick, and of a yellowish-brown colour. There was no appearance of any female flowers; but there is every probability the tree will produce them next year, or, possibly, this season yet. It will then be another feather of honour in Mr. Iveson's cap, if he is as successful in fruiting this tree as he has been already with the Mangosteen. I have not heard that the *Artocarpus* has ever flowered before in Europe. Every general reader will recollect the mutiny on board the ship *Bounty*, Captain Bligh, who was sent, about eighty years ago, to the South Sea Islands, purposely to transplant this useful tree to our West India Islands. He succeeded in procuring many hundreds of plants, and had prosecuted his voyage successfully towards his destination, with the trees in excellent condition, when a large portion of the crew, attracted by the mild climate and alluring manners of the inhabitants of the islands they had just left, mutinied, put their commander in an open boat, with a few companions, and steered back to what they called an earthly paradise, thus, for that time, frustrating the good intentions of government. However, notwithstanding that unfortunate failure, the trees have been, since that time, conveyed to the west, and are now growing and fruiting, and are highly appreciated there. My son resides in the Demerara colony, and he assures me the trees are very fruitful, and when the fruit is roasted it has the taste and appearance of new, light bread. These circumstances render this tree peculiarly interesting, and I trust the tree at Sion will produce fruit shortly. It has advanced one step towards it without any particular care or treatment, excepting the usual attention to repotting, watering, heating the air more in summer than winter. Not nearly so much attention has been bestowed upon it as has been given to the Mangosteen, yet it has,

unexpectedly, produced its curious, long, male catkins, the first step towards fruiting.

MANGOSTEENS.

A traveller from the East Indies had called at Sion a few days before me, and had with him a wooden model of the fruit of the Mangosteen, the natural size, from which it appears that the fruit at Sion had not reached the full size. The model was nearly double the size. This encourages the hope that when its culture is better understood, and the tree acquires more strength, the fruit will be really an acquisition for the dessert, and will be a corresponding dish to the Pine-Apple and the Melon. Some of my younger brethren may live to see Mangosteens as common on the table as either of the fruits mentioned, and I think, in order to bring about so desirable an event, methods ought to be taken to induce early fruitfulness. Young trees should be raised by cuttings or layers from the tree that has fruited. These would naturally fruit earlier than a seedling tree, reasoning from analogy, as in the case of Apples and Pears, seedlings of which, even in the open air, require from seven to fifteen years to produce fruit; whereas, cuttings or grafts will fruit the second, or, at all events, the third year. The Mangosteens at Sion are looking remarkably well. The foliage is a good colour, and the shoots are short and strong—just such shoots as a propagator would wish for as cuttings; and if these are taken from the fruit-bearing branches, I am pretty certain they would fruit much sooner than the parent tree has done. I noticed several young trees about three feet high. These I would graft in the spring with scions from the tree that has fruited. These grafts would be brought to bearing even sooner than plants raised from cuttings.

STANWICK NECTARINE.

So named from the place where it was first raised and fruited. Stanwick is in the North Riding of Yorkshire, and, like Sion House, belongs to the Duke of Northumberland, and he resided there when he was Lord Prudhoe, previous to the death of his brother, the late Duke. Our readers will recollect that this Nectarine was brought into public notice by its owner giving all the stock—nearly one hundred young trees—to the funds of the Gardeners' Benevolent Institution. I think, if my memory serves me right, three hundred pounds were the result of that very liberal donation. Now, it is a regretful matter that the variety has not as yet answered the public expectation. It certainly is a good bearer, and a large, well-flavoured fruit; the only drawback is its extreme lateness, which, in the warmer parts of England is, perhaps, an advantage, as it thereby prolongs the wall-fruit season; but in the north, the fruit is prevented by the early frosts from ripening at all. Mr. Iveson, the gardener at Sion, however, informs me that the gardener at Stanwick says it is an excellent fruit with him, and he ripens it perfectly, though so far north; and the means he adopts is to bud this Nectarine on an early Peach-tree. I am glad to make this fact known to the public, and would advise every one that has a Peach-tree to spare to bud the Nectarine upon it. Nurserymen, also, should work it upon one year old Peach-trees, such as the *Royal George*, for instance. They could then recommend this excellent variety of the Nectarine to their customers.

T. APPELBY.

GARDENING FOR THE MANY.—SEPTEMBER.

GENERAL REMARKS.—The golden month of September is scarcely less prolific in the garden than it is in the field. Vegetables and fruit abound in variety, and to a perfection which they do not in other months—

August, perhaps, excepted. But this abundance ought not to occasion the cultivator to relax his endeavour to meet the demands of another season, as at this time much is to be done that way, and some duties require attention to make the crops of the present autumn as profitable as possible, as well as the ordinary routine work of the season. Now, as it is important to make the most of the growing season, it would be well to clear away all crops that are no longer useful, not only to remove their unsightliness, but also to prevent the ground being robbed by the exhausting influence of a runaway crop still remaining on it.

At this season, the mellowing effects of settled, dry weather, if it should be such, ought not to be lost sight of; and on that account the ground ought to be carefully exposed to its influences as much as possible; besides which, certain crops want planting, which must not be delayed; added to which, there are several things in the flower-garden wanting attention, as well for present appearances as for future wants.

The general appearance of a flower-garden, at this time, depends in a great measure on the quantity of bedding plants used in its decoration, as these now show their powers to advantage. The great mass of ordinary hardy, herbaceous plants being over, and dry weather hastening annuals to a speedy dissolution, bedding plants, in the shape of Geraniums, Calceolarias, Cupheas, &c., are now the glory of the flower-garden. However, as these are supposed to be pretty freely planted in the beds, it is only necessary here to observe that their propagation ought to be attended to.

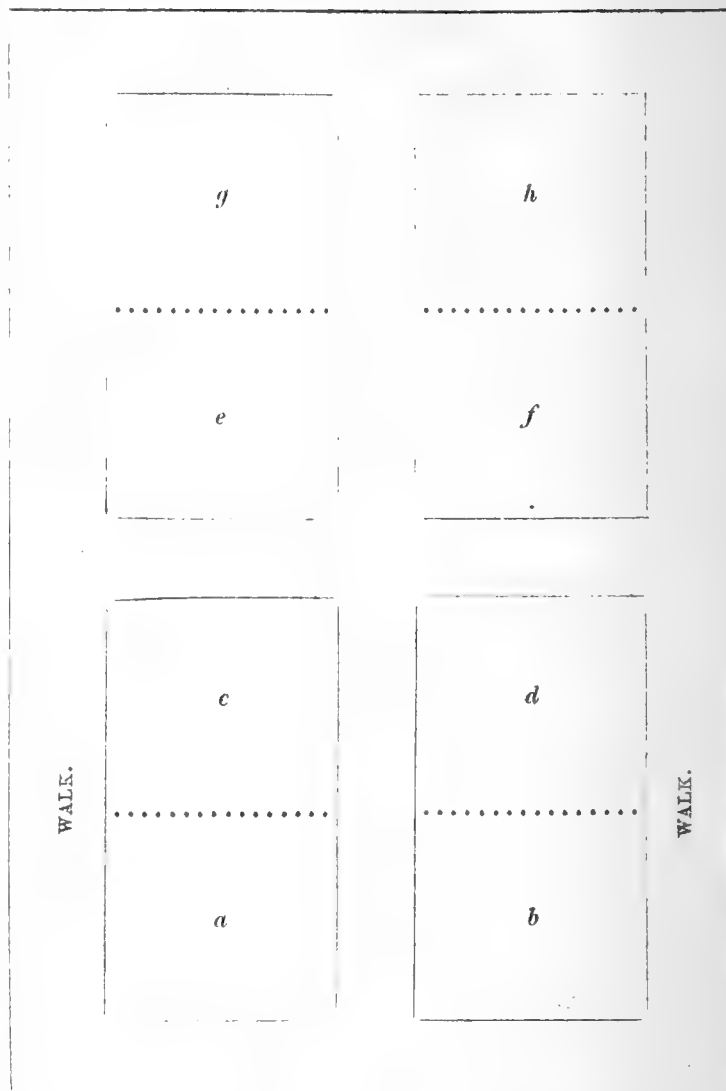
Fruit-trees, if duly regulated in the earlier months of summer, will not want any particular notice now, save to protect the crop from wasps and other depredators; but Strawberry-beds will want dressing, and the general features of the whole will be much improved by the various little duties which appertain to the term "neatness," which every one will admit enhances the merit of whatever is good, and, in a great measure, compensates for what is not so; neither are the objects cultivated entirely insensible to it, for we often see a plant or a tree thrive in proportion to the care bestowed on it in trifling matters. Doing everything at the right time is also necessary here, for without that, scarcely any effort or skill can compensate for delay; and if it does, the object gained is rarely so well performed.

a.—The dressing recommended last month will, it is hoped, have been effected before this; but if not, it is not too late to do it yet; but no time ought to be lost; after which, little will be wanted until another year, except keeping weeds away, and any other litter removed that may accumulate there. *Raspberries* will now be done bearing, and the old canes may at once be cut away, which will give strength to the young ones intended for next year's bearing; put some stakes to the autumn bearing ones, and tie them up as they require it; they usually begin to ripen their fruit in the first week of the month, and continue in production until severe weather sets in; a few ought to be in every garden, and their treatment and culture are extremely easy.

b.—This plot, being all planted with winter crops last month, nothing is wanted now but to earth them up as they require it; and if any backward ones want to be urged on, a few applications of manure-water will restore them wonderfully; but it is not advisable to continue a gross, luxuriant growth too late in the season, as the plants are thereby rendered less hardy, and suffer accordingly, by the severity of the weather.

c.—Little is wanted here, save to keep the space clear of weeds; and if any plants have been occupying the alleys between the *Asparagus-beds* they must

not be allowed to interfere with the legitimate occupant. Salt having been used at times, the last few months, may now be only sparingly applied, as the growing season is fast getting over. Gather the little seed of *Sea-kale* allowed to ripen, and clear the ground thoroughly of weeds and other encumbrance.



d.—Encourage the growth of *Celery* by all possible means, as the lateness of the *Onion* crop has prevented that being put in so early as it otherwise would have been; occasional application of liquid-manure will be of service. Earth up all that is ready, although a too hasty beginning that way is not to be commended; but a slight movement of the earth in the trenches and by the sides of them will be found beneficial. Remove stalks of *Lettuce* that may have been occupying the tops of the *Celery* ridges, and give the whole an air of neatness, which promotes the growth of the plants more than is generally believed.

e.—If the weather be dry, the mildew will have affected the *Peas* very much, so that the season for them will most likely soon be over, to the advantage of the *Brocoli*, *Savoys*, and other winter stuff, which was recommended to be planted between the rows of *Peas*, and in removing them be careful not to injure the future crop; a slight digging over will be of service, after all is cleared away, and the space occupied by the *Peas* had better have an allowance of liquid-manure to induce the roots of the ensuing crop to spread that way. Give a slight earthing-up to the plants by-and-by, but not until they have attained a certain amount of robustness, which immediate earthing-up would probably prevent their attaining. Make good deficiencies, and keep all clean.

f.—As soon as the earliest crop of *Kidney Beans* is over, a plot must be well manured and dug for the *Spring Cabbages*, which must be planted out as soon as the ground is ready, in a usual way. Plants sown the 10th of August are early enough, but a single row, or more, might be planted with those sown the first of that month; in this case, it is better to plant double the number of plants wanted, and remove one-half of them early in spring. Cabbage-plants may occupy a space two feet square; but in this first plantation they may stand one foot apart in the row. Do not plant too deep, but shallow drills may be drawn, and be sure and make the plants fast in the holes made for them.

g.—Remove the Beans when done with, and dig the ground, which will be in readiness for *Cauliflower*, or some other autumn-planted crop. The *Carrots* will not require any particular attention until the end of the month or beginning of next, when they may be taken up and stored away. *Beet* and *Parsnips* had better remain in the ground until February; or March, at all events; only take up in the autumn what is wanted for the time.

h.—The *Celery* will require earthing-up several times this month, only being careful not to begin that operation too soon; and be sure not to bury or injure the centre of the plant. The crop intended for latest supply had better be blanched with coal-ashes, which, being placed against the plant, might be banked up behind with earth. Keep all free from weeds, and take care that nothing gets into the hearts of the *Endive*, which we suppose is advancing apace on this plot.

KITCHEN-GARDEN BORDER.—Sow a bed of *Cauliflower* on some open, sunny place, and put any spare hand-lights over it. A little hardy *Hammersmith Lettuce* might also be sown at the same time, and *Spinach* and *Radish* might also be sown, if not done last month. Manure and dig any vacant spaces, and plant one crop of *Lettuce*, *Endive*, and, towards the end of the month, a little *Early Cabbage*. House such things as *Onions*, *Garlic*, and *Shallots* that may have been harvesting here, and dry and tie up any bunches of *Herbs* that may be wanted. Perhaps the best way for that purpose is to do it before the fire, and rubbing the foliage off to pack it away in wide-mouth bottles. If there be plants of *Vegetable Marrow* here, do not allow them to overrun valuable crops in their neighbourhood; but to prolong their bearing, scatter sulphur on any mildewed leaves that may present themselves, giving the plant a good soaking of manure-water at the same time. A similar remedy might be applied to ridge *Cucumbers*.

FRAME.—Excepting the *Melons* will not be all done with until the end of the month, all that is needed now is to keep the plants clear of insects and mildew, but if it should happen to be at liberty by the beginning of the month, let it do duty over the Cauliflower-bed, *i. e.*, when the Cauliflowers are sown; and I might add, that a few *Ten-week* or *German Stocks* might also be sown at the same place. By-and-by the frame will have plenty to do, as a few seedling *Cinerarias*, kept for use in the windows, will all want to be under cover next month, and other window plants as well; but of this more will be said hereafter.

FRUIT-TREES.—If all was done last month that ought to have been done, but little can be done this month, save preserving the fruit from birds, wasps, and other depredators. Muslin will be found the best article that way. Gather the different kinds as they ripen, and lay them in a cool place; but even in that a medium must be preserved; for fruit placed in an ice-house soon loses flavour, although it will keep longer there; but the cool, airy room, will serve all the purposes of the

autumn, and fruits intended for keeping ought not to be gathered too soon, as the autumn months are more fatal to fruits than December and January.

ROCKERY.—Little can be done here save clearing away anything that is no longer ornamental, and see that nothing valuable is injured by a more robust neighbour; in other respects, plants must be allowed to ramble as they please. At the same time, take notice of what is not worthy of cultivation there, and remove it at the fitting time. *Periwinkles* can be dispensed with in small or dressed rockwork, as it is apt to overcome everything else.

FLOWER-GARDEN.—Propagating, and otherwise preparing for another year, will be the principal employment here now, excepting that all departments must be kept in neat and efficient order; and as the flower-borders will now be gay with *Geraniums*, *Calceolarias*, *Fuchsias*, *Cupheas*, and other showy plants, to say nothing of *Dahlias*, and other tall things, every place ought to be in neat order, and everything offensive removed; and as *Annuals* will be about done with, let them be taken away at once, and likewise the earth on which they grow, about a basketful or so, and fresh material brought in, on which plant such things as *Brompton Stocks*, double and single *Wallflowers*, the latter being best by one double and two single ones together, and the same number of *Stocks*. Probably some of the *Antirrhinums* and *Dielytras*, struck early, will also be fit to plant out; as well as *Heartsease*, and other things, not forgetting the beautiful *Cherianthus Marshallii*, which, as a compact plant, looks well all the winter. This may also still be propagated by putting in cuttings early in the month, but it is now too late for the great bulk of herbaceous plants striking, only such as grow from suckers, or have partial roots, may still be separated. But it is the very best time for *Scarlet Geraniums*, provided they are put in the beginning of the month. Cuttings stuck in an open, sunny border, amongst any open, sandy soil, will speedily strike root, they requiring but little water, save at first when put in. Those of *Fuchsias* will require more shade, and of *Roses* may be put under a hand-glass in some sheltered place, where they will stand the winter. Cuttings of *Calceolarias* need not be put in until next month, but *Verbenas*, *Cupheas*, *Gaillardias*, *Petunias*, and such plants, ought to be propagated forthwith to the full extent wanted. These had better be put into pots at once, and stand the winter in them. *Roses* may still be budded, and many shrubs may now be planted, if wanted; but pruning, or rather cutting-down, had better be deferred until March, not but that the present time is equally good, but that the stunted appearance of evergreens, after cutting down, is quickly followed by new growth, when the operation is left till spring, and there is the whole winter's use made of them in the mean time.

J. ROBSON.

ALLOTMENT FARMING.—SEPTEMBER.

ALTHOUGH the days are getting shorter, the nights colder, and the gaiety of the flower-garden on the decline, nevertheless, by attention in picking off dead leaves, faded flowers, by staking and tying plants, and by keeping everything neat and tidy, if favoured by fine weather, which is very probable, the gratifications to be derived from flowers will be extended to a late period of the autumn.

CHINA ROSES may now be propagated by cuttings with facility. Towards the end of the month *Scarlet Geraniums*, *Fuchsias*, or any other choice plants that are worth preserving, and that are likely to be injured by frost, should be taken up, the soil shaken from the roots, the branches and roots shortened back, and then put into small pots, removed to a pit, frame, or any other place of protection, and if they could be placed upon a little bottom-heat, fresh roots would

be made to fill the pots, and, therefore, would be better prepared to withstand the vicissitudes of winter; to be kept rather dry and protected from frost.

FLOWER SEEDS of various kinds should be collected and dried, keeping each in a separate paper, with its name, height, and colour, or any other observations worthy of notice written upon it.

HYACINTHS, good strong bulbs should now be selected for forcing in pots; the compost may consist of any good, light soil, such as sandy loam, well-decomposed cow-dung, and a small portion of sand. As the organizable matter is already dried up in the bulb, it only requires to be placed in favourable circumstances to forward its development; the pots to be placed in some dry situation and covered with six inches of coal-ashes until wanted for forcing.

CUTTINGS OF SHRUBBY CALCEOLARIAS will now strike freely in sandy soil.

THE BEDS INTENDED FOR BULBS should now be got ready, and also those for young *Pinks* and *Carnations*; plant out biennials and perennials that were sown in the spring; keep *Dahlias* and *Chrysanthemums* neatly tied up, and protect tender plants from excessive wet.

The following beautiful and hardy annuals, *Clarkias*, *Collinsias*, *Leptosiphons*, *Gilias*, and *Nemophilas*, if sown now, will withstand the severity of ordinary winters.

In the allotment the cottager must decide at once what plots of ground he will leave to be thrown up into ridges during the winter, that the soil may be exposed to the pulverising influence of frost, and be ready for early spring crops; and what portions he will plant or sow at once.

A plantation of CABBAGES may now be made, plant them one foot apart, as for Coleworts, and in spring every intermediate row may be drawn out for use, and the remainder left to form hearts for Cabbages.

ONIONS should now be got off the ground, and well dried on any hard bottom in the open air, if the weather is dry, or removed to a shed, or any other place where they may be protected, if the weather is wet. The ground well-dug, with the addition of a little dung, will be a suitable place for the main plantation of spring Cabbages, which had better be got in without further delay.

THE PROTECTION OF GRAPES, by covering the bunches with gauze bags, from the attacks of insects, and the gathering of Apples, Pears, and other fruits, will require the particular attention of the cottager. He cannot be too careful in gathering the fruit, as the least bruise from falling to the ground, or from rough handling, will produce premature and speedy decomposition. When the fruit is ripe, which is indicated by its beginning to drop of its own accord from the trees, or by separating from the stem when slightly touched, or when cut the seeds are of a dark brown colour, it should be stored away in some dry, airy situation; not heaped together, but laid side by side, and after a few days wiped dry, when it will keep fresh and plump, according to the natural period allotted to each sort.

CELERY, the first earthing of a crop should not take place until it has made considerable progress; by commencing too early it is drawn up weakly; the side-shoots, if any, should be removed, and the soil pressed closely round the stalks with the hand.

CAULIFLOWER PLANTS should be planted out where they may be protected, or prepared for planting, under hand-glasses or frames.

WATER CRESSSES, slips of them will now strike root and grow in any damp situation.

THE HOE should be kept constantly employed amongst the growing crops.

POTATOES take up as soon as the haulm is withered. Any intended for seed should be exposed to the sun for a few days, until they become green, and then stored away.

SAVOYS, WINTER GREENS, BROCOLI, and CABBAGES, should be earthed-up as a means of promoting growth and guarding against early frosts.

PEA AND POTATO HAULM and all weeds should be removed to the compost heap, not only to give a tidy appearance to the allotment, but also to prevent the rapid production of damp and mouldiness which are quickly generated among masses of decaying vegetation. Now is the time for the cottager to collect all weeds and masses of decaying vegetation that are so abundant at this season, to be mixed with a

little lime, and occasionally turned over during the winter. This will make a rich compost for use in spring.

Thin WINTER SPINACH to four or five inches apart in the rows, and vacancies can be filled up by transplanting.

NEW VARIETIES.—In the whole range of the science of horticulture, there is no subject so productive of advantage to the gardening world, and at present so confined to the operations of a few enterprising horticulturists, as that of raising new and improved sorts of fruits, flowers, and vegetables; that such is the case, must be accounted for on the supposition that gardeners cannot devote that attention and perseverance so necessary to follow up experiments to their final results, or that the tenure of office appears to be surrounded by so many uncertainties, that the results of the experiments that may be commenced would be transferred to other hands, or that the facilities for performing such useful investigations, on account of the limited means allowed, or some other considerations that are too frequently applied as "flattering unction to our souls," for all and every neglect or omission. But each and every one of these impediments should not act as a permanent obstruction, but should incite us to surmount such obstacles for the laudable purpose of adding to our store of comforts in the shape of more delicious fruits and vegetables valuable for quality and quantity.

To an amateur who had time to attend to such investigations, the pleasure would amply repay the attentions devoted to such subjects.

With the raising of new sorts of fruits, flowers, and vegetables, as with all other experiments, if a beginning is once made, the interest taken in the subject excites a desire for investigation which increases as we approach the period of ascertaining the results. If the results are satisfactory, and we have obtained an improved variety, we are encouraged to proceed in such an interesting and useful employment; but if the results are fruits, flowers, and vegetables of inferior quality, the disappointment has given a gain of knowledge whereby we are the better enabled to enter upon another series of experiments with greater probability of success. There is something so fascinating in such experiments, that if once we have commenced them we are sure to be led by the pleasure, interest, and mystery with which they are accompanied, until the results are produced.

For raising seedlings of Gooseberries, Raspberries, Strawberries, Currants, and of all vegetables and many flowers, does not require a great stock of patience, for seeds of them sown in autumn will produce the second season. If seedlings show any features indicative of an improved breed, it would be well to give them a further trial to the third year, when their natural qualities will be sufficiently matured to be retained or rejected according to their merits or demerits. Seeds of the above-named fruits produce varieties of the parent plant most frequently inferior to the original stock, but by selecting one sort, valuable for its habit of growth, productiveness, or size, to be impregnated by another sort, valuable for its flavour, the offspring would be most likely to inherit the good qualities of the parents in a superior degree.

It is probable by the cross-impregnation of two sorts, one of them deficient of some good quality that the other possesses, an improved variety may be raised, inheriting some share of the good qualities of both parents. What is found to be true in cross-breeding for an improved race of animals, is equally true when applied to the improvement of fruit, flowers, and vegetables.

This will be a busy month, as the crops are unusually late this season, for cutting and stacking oats, wheat, beans, &c. The land lately cleared of Peas or Beans should be now prepared, by ploughing or digging, for sowing *Wheat* next month. *Beans*, cultivated on the farm, usually follow a corn crop, and generally precede *Wheat*, for which, as they are manured, they are considered a good preparation; they succeed best on a clayey loam that is deep and dry. The ground should be now prepared by manuring and deep digging for sowing the *Russian* or *Winter Bean* in October.

We trust, that the anxiety respecting the results of the harvest, on account of the heavy rains that had fallen during the early part of August, will be removed by a series of fine harvest weather, and that we may be thankful to the Giver of all Good for the abundance of all crops, fruits, cereals,

and vegetables, that are vouchsafed to us this season. It is also pleasant to hear that the crops in Spain and Portugal are already secured, and are excellent both in quantity and quality; that the reports of the crops in Germany and Denmark are satisfactory; and, above all, and before all, that the Wheat crops in America are now safe, and for extent of acreage, abundance of yield, excellence of quality and condition, are unprecedented in the agricultural annals of the United States.

WILLIAM KEANE.

THE APIARIAN'S CALENDAR.—SEPTEMBER.

By J. H. Payne, Esq., Author of "The Bee-Keeper's Guide."

AUTUMNAL UNIONS.—The end of this month will be the most proper time for effecting autumnal unions, the advantages as well as the necessity of which cannot be too much insisted on; for weak stocks kept through the winter are worse than valueless, they require much trouble and expense, and after all are good for nothing. To effect unions, the parade of fumigating apparatus and materials, puff-balls, bellows, perforated zinc, &c., are unnecessary,—a little tobacco and a pipe is all that is required. Gelieus' method, which I have adopted successfully for many years, is performed easily, and without danger. I have frequently accomplished it without any protection whatever. He says, "When the swarms have not been able to lay up a sufficient provision during the fine weather, I weigh them at the end of the season, and knowing the weight of each empty hive, I can tell exactly the quantity of honey they have in store. If they are three, four, five, or six pounds too light, I preserve them by making them up to from fifteen to twenty pounds by feeding. When the swarms have only about one-third, or one-half of the quantity of honey which would suffice to feed them, I might keep them alive by giving them as much more as they require. I have frequently done so, but this plan costs too much honey, and gives too much trouble, and, therefore, I generally join them into one. For this purpose, I leave the heaviest swarm untouched, and in the morning of a fine day in September, or the beginning of October, I commence by blowing a few whiffs of tobacco-smoke with my pipe in at the door of the hive of the lightest swarm, then turning up the hive, and placing it upon its top on the ground, I give it a little more smoke to prevent the bees from becoming irritated, and to force them to retire within the combs; I proceed to cut out all the combs in succession, beginning with the smallest, sweeping the bees with a feather off each piece back into the hive, and then I place the combs, one after another, into a large dish beside me, keeping it, at the same time, carefully covered over with a napkin, to prevent the bees returning to their combs, or the smell of the honey attracting others that may be flying about. The last comb is the most difficult to come at, being completely covered over with bees; I detach it, however, in the same way as the others, but with greater precaution, sweeping the bees off very gently with the feather until there is not one left on it. This operation I perform without gloves or any other protection, armed only with my pipe; and for ten times that I treat them after this fashion, I seldom receive one sting, even when I act unassisted.

"The combs being all removed, the swarm remains as completely destitute of food as it was on the day of its emigration, and I replace it on its board in the same spot it occupied when full, and leave it till the evening, by which time the bees will be clustered together like a new swarm. During the whole of the day, which I shall suppose to be fine, they occupy themselves with great earnestness cleaning their house, and making such a noise in removing the little fragments of wax that have fallen on the board, that any one who did not know that it had been emptied would take it for the best and strongest of the hives. Before night, when they are all quiet, I throw a few whiffs of smoke in at the door of the hive which I mean my deprived swarm to enter, and which should be its next neighbour on the right hand or the left, then turning it up, and resting it upon the ground, I sprinkle it all over with honey, especially between

the combs where I perceive the greatest number of bees; five or six table spoonfuls generally suffice, at other times three or four times as many are required. If too little were given the new comers might not be well received, there might be fighting; and by giving too much, we run the risk of drowning them. One should cease sprinkling when the bees begin to climb up above the combs and shelter themselves on the sides of the hive; this done, I replace the hive on its board, raising it up in front with two little bits of stick, so as to leave a division of an inch between it and the board, to give free access to the bees; I also spread a tablecloth upon the ground before it, raising and fixing one end of it upon the board by means of two bits of stick that are placed as a temporary support to the hive; I then take the hive that was deprived of its combs in the morning, and with one shake throw the bees out of it upon the tablecloth, which they instantly begin to ascend, while, by the help of a long wooden spoon, I guide them to the door of the one that is placed for their reception; a few spoonfuls of the bees raised and laid down at the door of the hive will set the example, they enter at once, and the others follow quickly, flapping their wings and sipping with delight the drops of honey that come in their way, licking and cleaning those first inhabitants that have received the sprinkling, and with whom they mingle and live henceforth on good terms. Next morning early replace the hive, remembering to put it a little to the right or left, that it may stand precisely in centre of the place they both occupied before the union. I have frequently united three swarms in the same manner, and with the same success, taking care to empty, in the morning, those on each side, and to make the bees enter the middle one in the evening, after it has been sprinkled with honey."

I have adhered strictly to these directions, except in "raising and fixing the tablecloth to the board." Making the bees ascend, I have always found to be a slow process; but placing the hive they are to join over them when heaped upon the cloth is much quicker, and equally successful.

Old stocks that are rendered weak by swarming, or by having too much honey taken from them, may be united in the same manner, with this difference only, that double the quantity of honey should be used in sprinkling.

LINARIA VULGARIS var. PELORIA.

THIS variety is a very striking and singular looking flower. It is a labiate runaway to a regular round corolla, containing five male organs, as in common with a Pentandrous plant. Yet, it is nothing more than a mere variety of the *Linaria vulgaris*, or common Toad Flax.

What a puzzle for a young botanist, who had never seen or heard of it before, to find such a plant in a wild state. How he would puzzle himself about it—finding a common Toad-Flax-looking-plant, with a round tubular corolla, containing five stamens, and five spurs or nectaries! He might possibly guess it to be only a variety of the *Linaria vulgaris*, from the habit of the plant; and, at any rate, he would find a very rare addition to his stock of knowledge. I have not seen a specimen of it for the last twenty-six years, even in a cultivated state, until the Editor of THE COTTAGE GARDENER kindly put this into my hands on the 8th of August, 1855. It is, certainly, said to be found in sandy fields about Clapham; and in a wood, in Lincolnshire. This may be so, yet it is a very rare plant to see anywhere, either in a wild or cultivated state. This need not be so, if amateurs and gardeners were a little more notice-taking about rare and curious plants, minding where they planted such things, and taking care to get duplicates of such rare and beautiful varieties.

There is nothing, I believe, so pleasant as visiting a garden, whether it be filled with choice and curious plants, in the mixed style, or the showy and well-blended beds, filled according to the bedding-out system. Each is beautiful, and each requires thoughtful skill to keep it up to the mark of excellence.

I am running away from the *Linaria vulgaris* and its varieties, for it has several varieties. The parent is a very beautiful plant in itself; its large yellow flowers make

a very imposing appearance, when in bloom, on our dry, chalky or gravelly hedge-banks and barren fields, as well as on poor cultivated ones too, where we have frequently seen it. Then, why should not this beautiful and curious variety which is called *Peloria* be more plentiful too?

The reason of its rarity is, that in the majority of cases it is planted into the mixed borders without a moment's thinking, and, perhaps, close by the side of some much stronger-growing kinds. Still, it may get up and flower the first season after being so planted. But somehow or other, no label was ever put with it. The place may look a little vacant, and something or other is sown or planted still nearer to it. These new encroachers flourish, and the other plants do so too, and this choice plant, like so many others, is for a time forgotten, and consequently suffocated by the over-growths around it.

I know of no better plant than that of the common Mignonette to quickly find its way over the borders where it does well, and this is very apt to get the upper hand of other plants, and destroy scores of choice things unseen or unthought of for the moment, until it is too late. Thus the scarce plant is a scarce plant still, and the same observation applies to thousands of others. Whereas, if the plant had been planted out in some open, dry-bottomed border, and not allowed to be overrun by others, it would have flourished and increased in bulk, so that division might have taken place, and its rarity diminished. T. W.

THE HOUSEHOLD.

(We shall be much obliged by any of our readers sending us approved recipes in cookery, hints for household management, or any other domestic utilities, for insertion in this department of our columns.)

THERE are few of the present generation who are not old enough to remember the time when glass was a costly material, and when its application was limited to such articles as could not well be formed of any other substance. No sooner, however, was the protective duty abolished, than several enterprising manufacturers directed their attention to the construction of glass utensils of various kinds, and it may be interesting to many of our readers to know, that among the various applications of this material, the common every day utensils of the household have not been overlooked.

We have just received from Messrs. James Phillips and Co., the extensive glass merchants, of Bishopsgate, a number of articles, which we think every householder should be made acquainted with. Among these are—

MILK PANS FOR DAIRY USE.—These require only to be seen to be appreciated; they are strong, and handsomely made, and appear to us to have the advantage over those of earthenware and zinc, in being much more cleanly, and much easier kept clean. We have heard, too, from those who have used them, that they do not require so much scalding as other pans. These were formerly obtained only from the Continent, but now they may be had without any trouble, in our own country, and at prices which bring them within the reach of everybody.

THE PRESERVE JARS are also well worthy of notice. These are in the form of usual earthenware preserve jars, and made of strong, greenish-coloured glass, and are made of all sizes, from three inches in diameter to ten inches. Some are furnished with glass lids which fit closely, but which may be made quite air-tight, either by pasting round the margin a strip of strong paper, or, what would even be better, by luting them with lard or some other such harmless substance. There are others of these jars without lids, and furnished with a groove on the outer side of the neck, by which bladder, paper, or any other material may be securely tied on. We must say we admire these contrivances very much, not only for their cleanly appearance, but for the safety they ensure from any evil effect that may arise from chemical action that sometimes takes place on the glaze with which earthenware jars are lined. For pickles, particularly, they are admirably adapted. The next article which comes under our notice is

FERN SHADES.—We have recently commenced a series of papers on the Ferns, and from the number of letters we receive on the subject, we know it is one which is highly popular with our readers. Many delight in seeing their beautiful Ferns introduced into the domestic circle; but without some such protection as these shades it would be impossible to preserve them. The shades of which we speak are glass cylinders with a domed top, which are placed on a glass pot wherein the Ferns have been planted, and they form, on a small scale, a pretty imitation of a Wardian case.

WASP TRAPS.—Whoever has lived in the country knows the annoyance which they are subjected to from the presence of wasps. Last season they were so numerous as to form quite a plague, threatening both the animal and vegetable world. The ingenious contrivance now before us will tend greatly to facilitate the destruction of these pests, and we therefore cordially recommend them to our readers.

TO MAKE NINE GALLONS OF TREACLE BEER.—Take four pounds of the best treacle, one pound of coarse sugar, and half-a-pound of hops, and put all together into the copper, cold; boil it one hour; after it has boiled, strain it off to cool, and set it to work as malt beer; treat it the same; it is fit to tap in a fortnight. When it has done working, if you can get one pint of finings, and stir in, it will do good. I generally boil a small quantity of fresh bran in it, which I consider improves it. Instead of fining, I dry my hops, when boiled and strained off, and put in. Six ounces of hops, when cool weather, are quite enough.—A SUBSCRIBER.

STARCH.—A little salt sprinkled in starch while it is boiling tends to prevent it from sticking; it is likewise good to stir it with a clean spermaceti candle.

NEW BOOKS.

THE BEE-KEEPER'S MANUAL. By H. Taylor.*

WE consider this the best treatise we have on the management of Bees. It contains nothing but sound directions founded on long experience, and its price is only four shillings. If we are asked whether we have any authority to sustain our opinion, we answer that we have an authority that is never mistaken for years together, and that authority is the British Public,—for they have purchased this volume so continuously, that though sixteen years have elapsed since the first edition appeared, yet the demand is such as to call this year for a *fifth* edition.

THE ROSE PROPAGATOR. By J. G. Knell.†

THIS little pamphlet is from the pen of one who, as he tells us in his title-page, is "of twenty years practical experience in the largest Rosaries in Europe." By-the-by, he should have spelt that title of a Rose Garden, Roseries. We know nothing of the author, but we believe him to be well-practiced, and thoroughly to understand what he writes about. It is full of sound directions for budding, grafting, layering, growing cuttings, planting, cultivating in pots, and pruning. We recommend the pamphlet strongly to our readers. The following is a specimen of the brief practical directions it contains:—

"PROVENCE ROSES.—Prune very close, keeping the dwarfs with a clean bottom. Propagate by budding and layers in July. Graft in March.

MOSS ROSES.—Prune close in all cases. Propagate by budding and layers in July. Graft in March.

HYBRID PROVENCE ROSES.—Prune moderate. Propagate by budding and layers in July. Graft in March.

ROSA ALBA.—Prune lightly. Propagate by budding and layers in July and August. Graft in March. Very delicate kind.

* *The Bee-keeper's Manual, or Practical Hints on the Management and Complete Preservation of The Honey-Bee, &c.* By Henry Taylor. Fifth Edition, with 100 Engravings. Groombridge and Sons, Paternoster-row.

† *The Rose Propagator, and Amateur's Guide.* By John George Knell. W. West, Kent Mail Office, High-street, Maidstone. Price One Shilling.

ROSA GALLICA, OR FRENCH ROSES.—Prune moderate. Propagate by budding and layers in July and August. Graft in March.

HYBRID CHINA ROSES.—Prune very moderate—shorten the strongest branches and cut the smaller at intervals. Propagate by budding and layers in July and August, and by cuttings from September till November. Graft in March.

HYBRID BOURBON ROSES.—Prune moderate. Propagate by budding and layers in July and August, and by cuttings from September till November. Graft in March.

AUSTRIAN BRIARS.—This variety requires different pruning from most other Roses: it requires nothing but to thin out the old wood, leaving the young wood in full length, as the bloom is produced on the young shoots. Propagate by budding and layers in July and August.

ROSA BERBERIFOLIA.—This Rose is but little cultivated, being so difficult to manage. It will do best either budded or grafted on the small briar.

BANKSIAN ROSES.—As this Rose blooms on the wood of the previous year's growth, it is proper to prune it as soon as the blooming season is over, and it will make wood that will bloom well the following year. Propagate by cuttings in May and September. This Rose requires a wall, and must be on its own roots.

HARDY CLIMBING ROSES.—This class of Roses require but little pruning in winter; it is only necessary to thin such old wood as is not wanted. This class of Roses are best pruned as soon as their blooming season is over, and by that system will furnish good wood to bloom the following season.

The following classes of Roses consist of perpetual blooming kinds, amongst which the most splendid varieties are found. Their blooming season is from June to November.

DAMASK PERPETUAL ROSES.—Prune moderate. Propagate by budding and layers in July. Graft in March.

HYBRID PERPETUAL ROSES.—Prune very close. Propagate by budding from June till September, and by layers in July and August. Graft in March.

ISLE DE BOURBON ROSES.—This class of Roses in most cases require close pruning; vigorous growing kinds, prune moderate. Propagate by budding, layers, and cuttings, from June till November. Graft in March.

TEA-SCENTED AND CHINA ROSES.—This class of Roses require but little pruning more than to thin out old wood to cause young shoots to grow. Propagate by budding, layers, and cuttings, from June till September. Tender.

NOISETTE ROSES.—In pruning this Rose it is only necessary to shorten the shoots moderately. Propagate by budding, layers, and cuttings, from June till September. Graft in March.

MACARTNEY ROSES.—This Rose being of short growth and shrubby habit needs but very little pruning: thin the old wood out if too thick. Propagate by budding and layers from June till September.

A few words on the small briar that is not considered of much use for the cultivation of Roses. It is useful and suited to such sorts as are spotted or striped. This kind of briar being of weak habit will cause the spotted Roses to come more perfect and distinct. It is suitable to sorts that are of delicate growth."

QUERIES AND ANSWERS.

GARDENING.

EXPORTS FOR WEST CANADA.

"Is it desirable to take steel digging forks, or any sorts of garden-seed, vegetables, or flowers, Dahlia-roots, Fuchsia-cuttings, &c., there?—W."

[A selection of British made forks and other tools for farming and gardening would be very useful in Canada, but you can buy most seeds as cheap there as you would in London. If you have any particular good kind of vegetable or fancy flower-seeds in hand, you will find them useful for exchanging with neighbours out there; but we would not advise you to buy seeds purposely to take out with you.]

HEIGHT ATTAINED BY BERBERIS AQUIFOLIUM.

"To what height will the evergreen Berberis (mentioned by Mr. Beaton, in THE COTTAGE GARDENER) grow?"—(To fifteen feet high in twenty years, if you like to encourage it.)

"I am about putting up a fencing all along my garden-walks, because my juvenile gardeners give me so much trouble, in running over the beds; and it occurs to me, after reading the article mentioned, that the Berberis would answer the purpose, would be better-looking, less expensive, and occasion less trouble. Also, what is the proper time to plant bulbs of *Amaryllis belladonna* in the open borders? and when would it flower there?—A COCKNEY AMATEUR."

[The beginning of June is the right time to plant dry bulbs of the *Belladonna*, if you are to have them from an out-door bed or border in this country. If they are in pots, you may plant them out any week in the year; or if you get them from the south of Europe, Madeira, or the Cape, you must plant them as soon as they come. October and November are the only two months in which they flower with us.

Before the *Berberis* would grow so much as to prevent the "juvenile gardeners" from running on to the borders, the said gardeners would be in the prime of life. From an experience of thirty years in this matter, we can assert, with truth and confidence, that no gardeners are more easily taught to run straight forwards, or round a circle, than such juveniles; but if you make sharp points and sudden turns in beds and walks, others besides juvenile gardeners will be led into such scrapes. But certain little marks on a flower-border are just as pretty as the flowers themselves; are they, or are they not? Pray do not fence your borders as you propose; rather teach the names of the flowers, and impress on the young people the hurt which trampling on the flowers causes them; and they will soon learn to avoid them. The height of the Berbery, when used instead of turf, must not exceed eight or nine inches. It can be kept down under six inches for ten years; and as the outside leaves rest on the walk on one side, and on the border on the other side, the apparent height of the land is only just one-half of the actual height; of that we are quite certain, and also of the fact that at the end of ten years the edging may look as well and be as low as any one chooses.]

BUDDING ROSES.

"Will you be kind enough to inform me the best way to bud Roses, as I have some Roses that I want to bud; and what kind of a knife it wants? Will a common penknife do? Also, the best way and time to set *Sweetbriar*.—A SUBSCRIBER."

[It is a bad policy to begin to learn a thing—war, for instance—by experimenting on the thing itself. You will spoil your Rose stocks, destroy a great number of most valuable buds, and prick and fester your fingers, right and left. Why, in the name of the *Queen of Bourbons*, did you not begin to practice budding two months ago, on laurels, plums, currants, or any bushes along the road-side, till your hand and eye, and all your fingers were familiar with every move,—then, and not till then, would be the time to bud Roses, which are the easiest things in the world to bud when one knows how; and, as budding will be done for a full month yet, take our advice and learn yourself how. Make a down cut in smooth, young bark, one inch long and no deeper than the bark; then make a cross-cut half-an-inch long, at the top of the down-cut, and the two cuts will form the letter T; then your penknife, or any knife, will raise the bark a little on each side of the down-cut, and this opening is then ready to receive a bud. To take out a bud and prepare it for inserting in the new cut requires practice. You can no more do it properly at first, than you could write a letter the day you began the pot-hooks; but you will soon learn. About three-quarters of an inch is a good length for a Rose-bud and shield. Some people make them longer, and others make them shorter; but everybody has the bud in the middle of the piece of bark which goes with the bud. At first, you may have the bark as long as two inches, then dress it off below the bud to a point,—this point is first put

in at the top of the down cut, and is pushed down till the bud is half-way to the bottom of the cut; the bark above the bud is then cut across *in the cross-cut*, and the two edges now meet and fit as nicely as possible, and the bud is ready for tying. In tying, you begin at the bottom of all, and work up till you have covered the whole opening and the cross cut, leaving nothing in sight but the bud and the leaf-stalk you took with it. The blade of the leaf is of no good, and would do harm if left on. Those who are up to the practice can cut the bark and bud so thin that nothing more is wanted but to trim the bottom to fit into the cut. Others, less up to the practice, take a thin slice of wood along with the bud, and then pick out the wood, and that does very well, only it is not business-like. Just one month after a bud is put in at this late season the tie should be loosened, and done again not so tight, to allow for the swelling of the wood, and then is the proper time to stop the shoot in which the bud is put. In the height of summer, three weeks is the time to untie and stop, because then the growth is faster. Never stop a shoot when you bud it.

The best time to set *Sweetbriar* is from the end of October to Christmas; but it will do in the spring. Put them in from six to ten inches apart in a row, if it is for a hedge, or "here and there," if only for single bushes.]

SOWING POTATO SEED.

"There have been a greater number of Potato berries this season, in Devonshire, than has been remembered for many years past, and there appears a general desire, in my neighbourhood, amongst the rural population, to attempt to improve the cultivation of that most useful root by raising new varieties; but no one here appears to know how these berries should be treated, and the seed preserved, to obtain the desired object. Will you, therefore, kindly give in *THE COTTAGE GARDENER* some information as regards the treatment of the berries (they have, in numerous instances, already fallen from the haulm), with the best way of preserving the seed till used; time of sowing the seed; and general management? Your compliance with this request may, I think, ultimately be of great use to the labouring population.—G. P., of B. House, Devon."

[We cannot give you a better answer than is furnished by the following extract from *THE COTTAGE GARDENERS' DICTIONARY* :—

"A variety of the potato is generally considered to continue about fourteen years in perfection, after which period it gradually loses its good qualities, becoming of inferior flavour and unproductive; fresh varieties must, therefore, be occasionally raised from seed. The berries, or apples, of the old stock, having hung in a warm room throughout the winter, the seed must be obtained from them by washing away the pulp during February. The seed is then thoroughly dried and kept until April, when it is sown in drills about a quarter-of-an-inch deep and six inches apart, in a rich, light soil. The plants are weeded, and earth drawn up to their stems, when an inch in height; and as soon as the height has increased to three inches they are moved into a similar soil, in rows, sixteen inches apart each way. Being finally taken up in the course of October, they must be preserved until the following spring, to be then replanted and treated as for store crops.

"The tubers of every seedling should be kept separate, as scarcely two will be of a similar habit and quality, whilst many will be comparatively worthless, and but few of particular excellence. If the seed is obtained from a red potato that flowered in the neighbourhood of a white tubered variety, the seedlings, in all probability, will in part resemble both their parents; but seldom or never does a seedling resemble exactly the original stock. At all events, only such should be preserved as are recommended by their superior earliness, size, flavour, or fertility.

"The early varieties—if planted on little heaps of earth, with a stake in the middle, and when the plants are about four inches high, being secured to the stakes with shreds and nails, and the earth washed away from the bases of the stems by means of a strong current of water, so that the fibrous roots only enter the soil—will blossom and perfect seed."

THE POULTRY CHRONICLE.

A MAN'S veracity may be as effectually impeached by a shake of the head, or a shrug of the shoulders, as by a long letter charging him with falsehood; and the shaker, the shrugger, or the writer, may believe, in all honesty, he is only doing his duty, and that indulgently, while, in fact, he is himself altogether wrong. At this time of year, those who have not succeeded in saving early chicken are too often sceptical as to the age of those exhibited by more fortunate breeders.

We desire to hold the scales of the poultry world evenly, and to prevent misconceptions, by the use of that knowledge of the subject which is always within our reach. It has struck us this is one of those things where that knowledge may be brought beneficially to bear.

The positive advantage of gaining early chicken prizes is so great, that no effort will be spared to accomplish it. They will, then, be early hatched, and generously fed. Chicken produced the beginning of January, will, in July, be nearly seven months old; the pullets will be laying, and the cocks showing spur. But the survivors of these precocious birds will be few, and will form the exception to the class, especially after such a season as we have had; and the startling difference between them and their competitors is almost enough to raise a doubt, where some little disappointment has prepared the mind to receive it.

But let us carry it out. The difficulty of accomplishing anything great has been apparent throughout this season. We have hardly ever seen an even pen of three large chicken—two of January, the survivors of hundreds, and one of April, matching in colour only. Such was one at Windsor, belonging to a lady of high rank; two surprising birds, one only half the size; the two were *all* that lived of the January hatch. We believe we are correct in stating, that the first-prize chicken at Tiverton were in the same predicament. Let other facts speak for themselves. Wednesday and Saturday are the principal days for fowls at Leadenhall market, all the best being Dorking fowls. From the last week in May, on either of these days, without previous notice, any one may select fowls of the year, killed and picked; cocks weighing from 6 lbs. to 7 lbs., and pullets 4½ lbs. to 5 lbs. each. These birds are scarce, and realise large prices—often 10s. to 12s. each—and the market is the place for bad colours, deficient claws, and even slight deformities. When, therefore, we see better birds than common exhibited early in the season, we rejoice at it. In the day when all poultry-keeping will be profitable, it will be by selecting the best for exhibition, and sending the inferior to market *during the spring* and scarce season. The exhibition of first-rate chicken will show what may be done, and we hope it will cause emulation. The constant reproach of this year, that general poultry breeding has only diminished the supply at market will then be done away with.

It is only at this time of year the lesson may be taught and learned. In December, when at Birmingham, and at some other places, there was formerly only one class for Dorkings, birds hatched at the end of May frequently beat the adults. They were no older than January chicken exhibited now. There will be May chicken shown at Birmingham, this year, two pounds heavier than any that have yet been exhibited, but their numbers and the time of year will cause them to pass without remark. The contrast will not be so great. No one should envy those who have been successful, but every one interested in the question should thank them. It has required no small pains-taking and much anxiety to take an early chicken prize in 1855.

REARING PEA-CHICKS.

"Can you inform me in your next number how to treat young Pea-chicks, and oblige—E. W."

[We have never kept Pea-fowl, but on inquiry of a practical and very successful breeder, are informed that the chicken are tender, and therefore must be most carefully kept from wet; and that curd, grits, or oatmeal, hard egg chopped small, small worms, or ants eggs, are the best food for them. In fact, they should be treated like young Turkeys, only with even more care.

This season is too late to depend on rearing any delicate birds with success. For example, at the beginning of the season we reared nineteen Polands out of twenty. Now, we should think ourselves fortunate if ten out of twenty survive.]

RABBIT MANAGEMENT.

"I have been greatly interested in reading Mr. Tegetmeier's article on profitable Rabbit-keeping in your number for June 12th, and intend to commence keeping them. I wish to know how many does I should keep with one male rabbit? I also wish to know what kind of rabbit is most profitable for the table?—RABBIT."

[One male rabbit (who must not be permitted to run at large with the does, or he will disturb and destroy the young) would be sufficient for almost any number of does; certainly for a much greater number than are likely to be kept by any private person. The large grey variety is regarded as the most desirable for table use, being hardier than the high-bred fancy varieties.]

NORTH LINCOLNSHIRE AGRICULTURAL MEETING.

WHAT would be said of the artist, who, in painting a farm yard, omitted to place the poultry on his canvass? Even in the days when their merits were misunderstood or neglected, as an article of trade, their value was appreciated as good, whether to entertain friends, to eke out a scanty repast, or to keep down the butcher's bill. Eggs have been in request at all times; but it is only of late that fowls have assumed the importance they deserve. Few counties have made such progress in supplying the London market with poultry as Lincolnshire, and we were therefore much pleased to see them represented at its agricultural meeting at Boston on the 23rd instant. Although not equal to them in quality, and in consequence not so valuable, still the Boston fowls are as well known in Leadenhall Market as the Dorkings, and many of the good inhabitants of the town have little idea of the amount of money annually received for poultry sent to the London market. There has been a marked improvement in the quality, but we advise them still to persevere, and we can assure them they will find it profitable.

We are led into these remarks because this show was not worthy either of the county or the town. It is admitted on all sides that the show of stock was the best ever seen; that the improvement is progressive, and may be attributed

to the annual exhibition and competition. We feel, that if we adopted a cuckoo note of success on all occasions, whether deserved or not, our report would be valueless; and we also offer to the committee, in all respect, those suggestions which we think will ensure another year a show of poultry worthy to consort with the great exhibition of other stock.

We would advise larger prizes, better pens, and all alike. The expense of the latter might be covered by a small sum paid for each pen that was entered. And above all, let the prize list be circulated, not only among members, but advertised in the local papers. This would ensure numerous entries, and increased admission money would more than cover additional expense.

The junction of poultry with other stock at agricultural meetings is now admitted to act most beneficially on the receipts at the meetings.

The *Dorkings* of Mr. Banks Stanhope, the *Game* fowls, the prize *Aylesbury Ducks*, all the *Geese*, the first prize *Rouen Ducks*, and the few *Turkeys* of Mr. Pocklington, would have done well at any show. The extra stock was excellent; but we suppose the owners could not make up pens. They were all chicken, and the bitter winter still tells upon them.

Mr. Bailey, of London, was the judge, who awarded the prizes as follows:—

DORKING COCK AND TWO HENS.—216. First prize, Stanhope, J. B., Esq., M.P., Revesby Abbey. 208. Second prize, Artindale, Thomas J., Boston.

SPANISH COCK AND TWO HENS.—117. Second prize, Everington, William, Skegness.

COCHIN-CHINA COCK AND TWO HENS.—221. First prize, Thomas J. H., Boston. 220. Second prize, Collis, Thomas, Boston.

GAME COCK AND TWO HENS.—223. First prize, Elmhirst, Moses, Esq., West Ashby Grove. (Brown-breasted red.) 225. Second prize, Grantham, Thomas, Stixwold. (Brown red.)

GOLDEN-SPANGLED, OR PENCILLED HAMBURGH COCK AND TWO HENS.—233. First prize, Sylvester, William, Lincoln. (Golden-spangled.) 231. Second prize, Brailsford, Miss, Toft Grange. (Golden-spangled.)

SILVER-SPANGLED, OR PENCILLED HAMBURGH COCK AND TWO HENS.—234. First prize, Collis, Thomas, Boston. (Silver-pencilled.) 235. Second prize, Leach, William, Boston. (Silver-pencilled.)

BANTAM COCK AND TWO HENS.—239. First prize, Nicholson, William, Brigg. 240. Second prize, Reynolds, A., Boston.

AYLESBURY DRAKE AND TWO DUCKS.—243. First prize, Brailsford, Capt., Toft Grange. 244. Second prize, Owston, W. S., Briggs.

ROUEN DRAKE AND TWO DUCKS.—246. First prize, Marris, Thomas, Ulceby Chase. 247. Second prize, Marris, Thomas, Ulceby Chase.

DRAKE AND TWO DUCKS, OF ANY OTHER BREED.—248. First prize, Grantham, Thomas, Stixwold. 251. Second prize, Sharp, Richard, Leake.

GANDER AND GOOSE.—252. First prize, Grantham, Thomas, Stixwold. 253. Sharp, Richard, Leake. Highly Commended.—254. Stanhope, J. B. Esq., M.P., Revesby Abbey.

TURKEY COCK AND HEN.—Highly Commended.—256. Pocklington, Cabourn, Boston. (American.) 257. Second prize, Stanhope, J. B. Esq., M.P., Revesby Abbey.

GUINEA FOWLS COCK AND HEN.—259. First prize, Grantham, Thomas, Stixwold. 258. Second prize, Everington, William, Skegness.

SIX FANCY PIGEONS.—262. Prize, Pocklington, Cabourn, Boston. (Pouters and Antwerp Carriers.)

SIX COMMON PIGEONS.—263. Prize, Artindale, Thomas S., Boston. (Blue Rocks.)

EXTRA STOCK.—297. Prize, Artindale, Thomas J., Boston. (Coop of Dorking Cockerels.) 298. Artindale, Thomas J., Boston. (Coop of Dorking Chicken.) 292. Livesy, Rev. Thomas, Stourton Hall. (Coop of Dorking Chicken.) 300. Owston, W. S., Brigg. (Grey Dorking Stag.)

POULTRY SHOW OF THE CLEVELAND AGRICULTURAL SOCIETY.

THIS Exhibition was held at Gisborough on the 16th of August. There were only ninety-five pens, and the competition not very close, except in *Cochin-China* chicken, in which all the pens were commended.

The judges were the Rev. R. Pulleine, Kirby Wiske Rectory, near Thirsk, and Mr. W. Trotter, of South Acomb, near Newcastle.

The prizes were awarded as follows:—

SPANISH COCK AND TWO HENS.—First prize, Mr. James Dixon, Bradford, Yorkshire.

THREE SPANISH CHICKEN.—First prize, H. W. F. Bolcow, Esq., Marton Hall.

DORKING COCK AND TWO HENS.—First prize, The Rev. Geo. Hustler, Appleton, Tadcaster. Highly Commended.—H. W. F. Bolcow, Esq., Marton Hall.

THREE DORKING CHICKEN.—First prize, H. W. F. Bolcow, Esq., Marton Hall. Commended.—The Rev. George Hustler, Appleton, Tadcaster.

BLACK OR WHITE COCHIN-CHINA COCK AND TWO HENS.—First prize, H. W. F. Bolcow, Esq., Marton Hall. (Black.) Commended.—H. W. F. Bolcow, Esq., Marton Hall. (White.)

COCHIN-CHINA COCK AND TWO HENS.—Any colour except Black or White.—First prize, The Rev. G. Hustler, Appleton, Tadcaster. (Buff.)

THREE COCHIN-CHINA CHICKEN OF ANY COLOUR.—First prize, H. W. F. Bolcow, Esq., Marton Hall. Highly Commended.—The Rev. G. Hustler, Appleton, Tadcaster. Commended.—Richard Hustler, Esq., Acklam Hall. Mr. Valentine Etches, Gisbro'.

GAME COCK AND TWO HENS.—First prize, Mr. William Gill, Stokesley. Highly Commended.—Mr. W. Barker, Castleton. Commended.—Mr. Chas. Holt, Mount Pleasant, Northallerton.

THREE GAME CHICKEN.—First prize, Mr. W. Gill, Stokesley. Commended.—Mr. W. Barker, Castleton.

GOLDEN-SPANGLED HAMBURGH COCK AND TWO HENS.—First prize, Mr. James Dixon, Bradford. Highly Commended.—C. Swarbeck, Esq., Sowerby, Thirsk.

GOLDEN-PENCILLED HAMBURGH COCK AND TWO HENS.—First prize, Mr. James Dixon, Bradford.

SILVER-SPANGLED HAMBURGH COCK AND TWO HENS.—First prize, Mr. James Dixon, Bradford.

SILVER-PENCILLED HAMBURGH COCK AND TWO HENS.—First prize, Mr. James Dixon, Bradford.

POLAND COCK AND TWO HENS.—Any variety.—First prize, Mr. James Dixon, Bradford. Commended.—H. W. F. Bolckow, Esq., Marton Hall.

BLACK OR WHITE BANTAM COCK AND TWO HENS.—First prize, Mr. James Dixon, Bradford. Commended.—Mr. W. Rudsdale, Danby.

BANTAM COCK AND TWO HENS.—Any colour except Black or White.—First prize, Mr. James Dixon, Bradford.

SPANISH COCK.—First prize, Mr. James Dixon, Bradford.

COCHIN-CHINA COCK.—First prize, Edward D. Swarbeck, Esq., Sowerby, Thirsk. Commended.—R. Hustler, Esq., Acklam Hall.

GAME COCK.—First prize, Mr. C. Holt, Mount Pleasant, Northallerton. Commended.—Mr. W. Gill, Stokesley.

GOOSE AND GANDER.—First prize, Mrs. Wooler, Barwick, Yarm.

YOUNG GOOSE.—First prize, Mrs. Sturdy, Ingleby Mill.

DRAKE AND TWO DUCKS OF THE AYLESBURY BREED.—First prize, Mrs. W. Fidler, Stokesley.

DRAKE AND TWO DUCKS OF ANY BREED EXCEPT AYLESBURY.—First prize, Mr. J. Richardson, Langbaugh. (Black Velvet.)

YOUNG DRAKE AND DUCK.—First prize, Mrs. Dodsworth, Seamer.

CAGE OF THREE COUPLES OF FANCY PIGEONS.—First prize, Master John Fidler, Stokesley Mill. (Tumblers, Fantails, and Jacobins.)

COUPLE OF FANCY RABBITS.—First prize, Mr. Watson Dixon, Marton.

TRAY OF TEN HEN EGGS.—First prize, Mrs. Watson, Gisbro'. (Black Spanish.)

EXTRA POULTRY.—First prize, Mrs. Dale, Newport. (Guinea Fowls, Cock and two hens.)

FEEDING AND FATTING CHICKEN.

"1st. What should I feed young chicken upon—say two months old? 2nd. When is the proper time to put them up to fatten? I have been much annoyed seeing them droop and die off, and those that live have grown but little since they were hatched.—T. K."

[When two months old, chicken are able to thrive well upon barley and any other grain. If they are all designed for table use at an early age, they should be well kept at every period of their lives; and some soft food, as barley meal or fine middlings, given once a day. Chicken not growing must be subject to some unfavourable influence; either the breed or the treatment is defective. Chicken in good condition may be put up to fatten at four months in summer to six in winter.]

LONDON MARKETS.—AUGUST 27TH.

COVENT GARDEN.

Of everything there is now an abundance, both in the way of Fruit and Vegetables, and among the latter *French*

Beans and Scarlet Runners are a perfect glut; perhaps there never was a season when there was a greater crop of these legumes than we have now. *Apples* are coming in plentifully; the dessert kinds are chiefly the *Margaret, Duchess of Oldenburgh, Red Astrachan*, and *Devonshire Quarrenden*. *Pears* also, particularly the early Orchard varieties, such as *Lammas, Crawford, Catherine, Green Chisel*, and *London Sugar*, are the most general; and there is a good supply of *Jargonelles*, some of which are very fine. *Plums* have made their appearance, and consist of *Orleans* and *Green Gage* from walls, and large quantities of *Rivers' Early Prolific*, an excellent Plum from standards. This is the only Plum from standards in the market, and is in good demand. *West India Pines* continue plentiful, as well as those home-grown. *Grapes* are abundant, and so are *Melons*. Flowers consist of *Asters, Verbenas, Geraniums, Dahlias, Marigolds, Mignonette, Cockscombs, Lobelias*, and *Roses*.

FRUIT.

Apples, kitchen,	
per bushel	3s. to 4s.
" dessert, doz.	4s. " 6s.
Pears	6s. " 12s.
Apricots, per doz.	2s. " 4s.
Peaches, per doz.	8s. " 15s.
Nectarines, doz.	8s. " 15s.
Cherries, lb.	— " —
Plums	— " —
Pine-apples, lb...	3s. " 6s.
Grapes, lb.	3s. " 6s.
Melons, each	2s. " 6s.
Figs	— " —
Gooseberries, per	
quart	— " —
Currants	— " —
Raspberries	— " —
Strawberries, per	
pottle	— " —
Oranges, per 100	4s. " 10s.
Lemons, doz...	1s. to 1s. 6d.

VEGETABLES.

Cabbages, per doz.	9d. to 1s.
" Red, per doz.	2s. " 4s.
Cauliflowers, doz.	3s. " 6s.
Brocoli	— " —
Savoy	— " —
Greens	— " —
Spinach, per sieve	1s. " 2s.
Peas, per bush.	4s. 6d. " 5s.
Beans	— " —
French Beans,	
half sieve	1s. 6d. " 2s. 6d.
Scarlet Runners	4s. 6d. to 6s.
Almonds, per lb.	2s. " —
Nuts, Filberts, lb.	— " —
" Cobs, lb.	— " —
" Barcelona,	
per bushel	20s. " 22s.
" Brazil, per	
bushel	12s. " 14s.
Chestnuts	— " —

Carrots, bunch ..	4d. " 6d.
Parsnips	— " —
Beet, per doz.	1s. " 1s. 6d.
Potatoes, per cwt.	10s. " 20s.
Turnips, bunch ..	2d. " 6d.
Onions, young,	
bunch	1d. " 2d.
Leeks, per bunch	2d. " 3d.
Garlic, per lb. ..	6d. " 8d.
Shallots, per lb.	4d. " 6d.
Horseradish, per	
bundle ..	1s. 6d. to 2s. 6d.
Lettuce, Cos, per	
score	6d. " 1s.
" Cabbage	6d. " 8d.
Endive, per score	1s. " 1s. 6d.
Celery, per bun.	8d. " 1s.
Radishes, Turnip, per	
doz. bunches	1s. " 1s. 6d.
Water Cresses, per	
doz. bunches ..	6d. " 9d.
Small Salad, per	
punnet	2d. " 3d.
Artichokes, each	.... 3d.
Asparagus, per	
bundle	1s. 6d. " 4s.
Sea-kale, per pun.	— " —
Rhubarb, per bdl.	2d. " 6d.
Cucumbers, each	3d. " 8d.
Vegetable Marrow	
per doz.	6d. " 1s.
Tomatoes, pun.	1s. " 2s. 6d.
Mushrooms, per	
pottle	8d. " 1s.

HERBS.

Basil, per bunch	6d. to 9d.
Marjoram, per	
bunch	6d. " 9d.
Fennel, per bunch	2d. " 3d.
Savory, per bunch	2d. to 3d.
Thyme, per bunch	2d. " 3d.
Parsley, per bunch	2d. " 3d.
Mint, per bunch	4d. " 6d.

GRAIN AND SEED.

WHEAT.

Kent and Essex,	
red, per qr.	68s. to 72s.
Ditto, white	73s. " 80s.
Norfolk and Suf-	
folk	68s. " 71s.
Dantzic	83s. " 90s.
Rostock	78s. " 87s.
Odessa	70s. " 73s.
American	80s. " 82s.

BARLEY.

Malting	29s. to 30s.
Grinding and	
Distilling	29s. " 31s.
Chevalier	31s. " 34s.

OATS.

Scotch, feed ..	31s. to 32s.
English	25s. " 26s.
Irish	24s. " 26s.
Dutch Broo ..	24s. " 28s.

GRAIN AND SEED—Continued.

Danish	25s. „ 27s.	Linseed, sowing	70s. „ 76s.
Russian	20s. „ 29s.	„ crushing	70s. „ 73s.
BEANS.			
Harrow	41s. to 43s.	Clover, English,	
Pigeon	42s. „ 48s.	red	60s. „ 68s.
Tick	40s. „ 42s.	„ Foreign do.	52s. „ 57s.
PEAS.			
Boiling, per qr.	42s. to 47s.	„ White	68s. „ 73s.
Common	36s. „ 38s.	Trefoil	28s. „ 32s.
Grey	37s. „ 40s.	Rye	40s. „ 43s.
Maple	40s. „ 42s.	Tares	— „ —
SEEDS.			
Turnip, White, per		Canary	46s. „ 50s.
bush.	— to —	Hemp	50s. „ 53s.
Swede	— „ —	Linseed Cake, per	
Rape	84s. „ 86s.	ton	£11 to £12 10s.
		Rape Cake	£6 10s. „ £6 15s.
		Indian Corn ..	47s. „ 50s.

HOPS.

Mid & E. Kent	£10 to £12	Sussex	£8
Weald of Kent	£8 to £10		

HAY AND STRAW.

Clover, 1st cut per		Meadow Hay, new	95s. to 105s.
load	110s. to 147s.	Rowan	— „ —
Clover, new ..	120s. „ 130s.	Straw, flail	30s. „ 36s.
Ditto, 2nd cut	90s. „ 140s.	Ditto, machine	28s. „ 30s.
Meadow Hay ..	90s. „ 120s.		

MEAT.

Beef, inferior, per		Mutton, mid. 3s.	10d. to 4s. 4d.
8 lbs. ...	3s. 4d. to 3s. 8d.	Do. prime 4s.	6d. to 4s. 10d.
Do. mid.	3s. 10d. to 4s.	Veal	3s. 10d. to 4s. 10d.
Do. prime 4s.	2d. to 4s. 4d.	Lamb	5s. 4d. to 5s. 10d.
Mutton, in-		Pork, large 3s.	8d. to 4s. 0d.
ferior	3s. 4d. to 3s. 8d.	Ditto, small 4s.	0d. to 4s. 6d.

POULTRY.

Probably owing to the harvest work which monopolises every one at this season of the year, the supply of poultry has been less this week. The demand has, however, been so small, the prices have not felt it. Grouse continues plentiful and good, but every package contains an unusual quantity of old birds.

Large Fowls 4s.	6d. to 5s. each	Pigeons	8d. to 9d. each
Smaller do. ...	3s. „ 3s. 6d. „	Rabbits 1s.	5d. to 1s. 6d. „
Chickens ..	2s. to 2s. 6d. „	Wild do.	9d. to 10d. „
Geese	6s. 6d. to 7s. „	Grouse	2s. to 3s. 6d. „
Ducks ..	2s. 6d. to 3s. 6d. „	Leverets ...	4s. to 4s. 6d. „
Quails	1s. to 1s. 3d. „		

PROVISIONS.

BUTTER.—Cwt.		CHEESE.—Cwt.	
Dorset, fine ..	104s. to 108s.	Cheshire, fine ..	74s. to 90s.
Do. middling ..	90s. „ 96s.	Gloucestershire,	
Fresh, per doz.		double	70s. „ 76s.
lbs.	10s. „ 12s.	Ditto, single	60s. „ 74s.
Friesland	98s. „ 100s.	Somerset	70s. „ 76s.
Kiel	94s. „ 98s.	Wilts, loaf	68s. „ 78s.
Carlton	98s. „ 102s.	Ditto, double	72s. „ 78s.
Waterford	98s. „ 102s.	Ditto, thin	54s. „ 64s.
Cork	98s. „ 102s.	Ditto, pines	72s. „ —
Limerick	92s. „ 96s.	Berkeley, thin ..	62s. „ 66s.
Sligo	— „ —		

BACON.—Cwt.		HAMS.—Cwt.	
Wiltshire, dried	80s. to 84s.	York, new	80s. to 90s.
Waterford	74s. „ 76s.	Westmoreland ..	76s. „ 86s.
		Irish	74s. „ 84s.

WOOL.

Down Tegs 1s.	2d. to 1s. 3d.	Leicester,	
Ditto Tegs and		fleeces ..	1s. „ 1s. 1½d.
Ewes ..	1s. 1d. „ 1s. 2d.	Long, heavy do.	11d. „ 1s.
Half-bred Hog-		Combing skins	10½d. „ 1s. 1d.
gets	1s. 3d. „ 1s. 3½d.	Flannel wool 1s.	1d. „ 1s. 2½d.
Do. Wethers 1s.	„ 1s. 2d.	Blanket wool ..	6d. „ 11d.
Kent Fleeces 1s.	1d. „ 1s. 2d.		

TO CORRESPONDENTS.

NAME OF BULB (P. D.).—We cannot guess the name, either from the written nonsense, or from your description. It is a good plan to expose seed Potatoes to the light and air for about a fortnight before storing them; turning them every day.

AUTUMN-FLOWERING PLANTS (F. E. B.).—You have transgressed our rule; besides, neither Mr. Beaton nor any of our contributors give lists of plants except through our pages.

VERBENAS (A Constant Reader).—They were all dry, and undistinguishably flattened in a letter. To name plants we ought to be furnished with them packed in damp moss in a box.

TOMATOES (A Constant Reader—Alford).—See "The Household" in our next week's number.

LAVENDER FLOWERS (Judas).—Write to Messrs. Butler and McCulloch, Herbalists, Covent Garden, London.

ROSES AT BIRMINGHAM.—"Mr. Appleby, in his notices of the Birmingham Botanical Exhibition (No. 345, p. 297), mentions some Roses exhibited there by me, saying he could not discover to whom they belonged. If, in a forthcoming publication, you would mention to whom they belonged, you would greatly oblige JAMES TOMKINS, *Showell-Green Nursery, near Birmingham.*"

NAME OF INSECT.—The insect caught in a warehouse in the City, on the 8th inst., is a female of the *Sirex Gigas*, which lives in fir timber, and sometimes makes its way out of the floors, &c., of newly-built houses, to the great alarm of the inhabitants.

IRREGULARITY (An Old Subscriber and Well-wisher).—THE COTTAGE GARDENER appears punctually on the publishing day in each week, and is supplied to all booksellers and news-vendors who apply for it. The delay is no fault of ours, and the only advice we can give you is to change your bookseller, if he continues to neglect his business, as he is evidently doing.

FRUIT-TREES AGAINST A STABLE (J. M.).—You should have told us in what part of the country you live, otherwise we cannot say what sorts of fruits will suit your locality. If you have the borders to make, use sandy and turfy loam for the purpose, but no manure. For Cherries you should have—*Elton, May Duke, Black Tartarian, Black Eagle*, and *Reine Hortense*. In Pears—*Ne Plus Meuris, Marie Louise, Passe Colmar, Beurre de Rance, Glout Morceau*.

CALENDAR FOR SEPTEMBER.

FRUIT-FORCING

AIR, give freely in all houses. AIR-MOISTURE, reduce the amount gradually. BOTTOM-HEAT must gradually decline; say at least one degree weekly until November. CUCUMBERS, for winter work must be got forward with similar attention as in spring. CHERRIES for forcing may be potted or shifted. CLEANING: let all glass be thoroughly cleaned this month: all painting, lime-washing, done also. FIGS, water late crops. FORCING (EARLY), prepare for by getting things to rest. FLUES, clean. GRAPES, watch ripe berries, use the scissors, remove laterals from. INSECTS, of all kinds, subdue. LININGS, attend to. MELONS, late, give spring culture to; beware of damps. NECTARINES, see *Peaches*. PINES, continue forward culture; water late swellers; repot last successions; and harden off the latter class in snug pits. PEACHES, remove late laterals; stop remaining leaders; syringe freely; and water at root moderately. PAINTING, carry out. REPAIRS, complete. RED SPIDER, subdue. STRAWBERRIES, in pots, give high culture to; keep them plunged above ground level. VENTILATION, attend well to. VINES; progressively remove laterals from late crops; apply fire-heat daily in all dull weather. VERMIN, destroy. WASPS, destroy nests. R. ERRINGTON.

FRUIT-GARDEN.

APPLES, gather as they are ready. APRICOTS, stop all growing wood, and remove all spray which shades the buds. BERRBERIES, gather. BUDDING, slacken bandages. CURRANTS, cover to preserve. CHERRIES, late, beware of birds and wasps. CRANBERRIES, collect. DAMSONS, gather. FIGS, stop all shoots, and thin out spray. GOOSEBERRIES, destroy caterpillars, and retard late kinds. INSECTS, subdue. MULBERRIES, gather. NUTS, gather and store. NECTARINES, see *Peaches*. PLUMS, protect from wasps. PEARS, stop all shoots, reduce coarse bristwood. PEACHES, stop all shoots, remove foliage from ripening fruit. STRAWBERRIES, plant; destroy runners. TOMATOES, stop growing. VINES, stop every shoot and reduce laterals. VERMIN, destroy. R. ERRINGTON.

FLOWER-GARDEN.

ACONITE (Winter), plant e. ANEMONES, plant best, e.; sow, b. ANNUALS (Hardy), sow, b. AURICULAS not shifted in August now remove; water and shade; prepare awning to protect in autumn and winter; sow, b. BUD perpetual Roses to the end of the month. BULBOUS-ROOTS, plant for early blooming, e. CARNATION layers remove, b. CHRYSANTHEMUMS, plant cuttings, &c., b. CUT ROUND THE ROOTS of large specimens intended to be taken up next month, b. Cut in large specimens of Geraniums, &c., in the beds to be potted, as soon as they break to make specimens of, b. CUTTINGS of evergreens, put in, b. DAHLIAS, number and make list of, while in perfection, describing their colour, height, &c. DRESS borders assiduously. EDGINGS, trim, plant. EVERGREENS, plant, b; make layers. FIBROUS-ROOTED perennials, propagate by slips, parting roots, &c. GRASS, mow and roll; sow, b. GRAVEL, weed and roll. GUERNSEY LILIES, pot. HEARTSEASE, plant cuttings; trim old. HEDGES, clip, e; it is the best time. MIGNONETTE, sow in pots, to shelter in frames. ROOTED PIPINGS, of Pinks, &c., plant out for blooming. PLANTING EVERGREENS, generally, commence, e. POLYANTHUSES, plant. RANUNCULUSES, plant, best, e.; sow, b. DOUBLE ROCKETS, divide and transplant. ROSES, cut down, which must be removed at Michaelmas, ten days before taking up. SEEDLINGS, plant out. SEEDS, gather as ripe, and keep down seed-pods in flower-beds. TRANSPLANT perennials, e. TUBEROUS-ROOTED plants, transplant.

TURF, lay. VERBENAS, cut the roots of favourite sorts six inches from the stem; water them, and in three weeks they may be removed safely to be kept in pots; a few plants thus treated are better than many cuttings. **WATER** Annuals and other plants in dry weather. **YUCCAS** in, or showing for, bloom, give abundance of water to. **D. BEATON.**

GREENHOUSE.

AIR, give freely night and day, unless when very stormy. **ANNUALS,** such as *Collinsias*, *Nemophilas*, *Schizanthus*, of sorts, sow towards the end of the month, for blooming in spring and early summer. **BULBS,** pot for early blooming, such as *Hyacinths*, *Narcissus*, *Tulips*, &c., also *Lachenulias*, *Erodiums*, &c. **CAMELLIAS**, still expose, but defend from heavy rains. **CUTTINGS** may still be made, and buddings proceeded with. **CINERARIAS**, sow for late blooming; prick off seedlings for spring flowering; shift into flower-pots for winter flowering. **CALCEOLARIAS**, sow seed; propagate by cuttings under hand-lights and shift small plants already struck; shrubby kinds for the flower-garden will be time enough after the middle of the month. **ERICAS** and **AZALEAS**, get under shelter, ready to be housed by the end of the month. **GERANIUMS**, **MYRTLES**, **SALVIAS**, &c., propagate by cuttings, shift into larger pots, to be established before winter, and prepare for taking up out in the open border by cutting round the roots, doing only one half at a time. When there is not plenty of room, cuttings struck early will answer better than old plants taken up, and will also save much labour. **GLASS, FLUES, &c.**, clean and repair. **PLANTS**, clean, tie, arrange. **POTS**, free from moss and filth, and fresh surface with suitable compost. In using new pots for hard-wooded plants, let them all be soaked, and then dried, before using. **SEEDLINGS** of all kinds, prick out as soon as they can be handled. **PROPAGATE** all half-hardy things, such as *Geraniums*, *Fuchsias*, *Salvias*, and especially *Calceolarias*, *Petunias*, *Verbenas*, &c.; the last three named will do better than if struck earlier, the smallest pieces will do best. They may either be planted in light sandy compost, in pots, or in a bed on a shady border; if on a north aspect, no shading will be required. **WATER** will still be abundantly required for plants growing freely, and those intended to bloom in winter; such as *Primroses*, *Cinerarias*, and *Chrysanthemums*, should have manure-water given freely. Whenever you observe the first flower-bud of a *Chrysanthemum*, though no larger than a pin's head, you may give the clear manure-water freely. Water should be given sparingly to plants that are to be put into a state of rest, just keeping them from flagging. All **SUCCULENTS** will now do better next season the less water they receive, provided their stems are not rendered very limp and soft. **TROPEOLUMS** with tuberous roots, pot whenever they begin to vegetate; they do not like shifting, therefore give a good-sized pot at once: give very little water until the pot is getting filled with roots, as they cannot bear sour sodden soil; let the pots be well drained. **CLIMBERS** will soon require cutting that have been growing rather naturally, in order that more light may be given to the plants below. If the house plants can be kept out of the house for a month longer, the creepers, to be beautiful, will require ample waterings.

R. FISH.

ORCHID-HOUSE.

AIR, give only on bright, sunny days, from 10 o'clock till 3. **BLOCKS,** continue to syringe morning and evening the first half of the month; the latter end in the mornings only. **BASKETS** may be kept rather drier, excepting such as *Stanhopeas* that are growing; let these be dipped in tepid water once a week, at least, using discretion, according to the state they are in as to being wet or dry. **DENDROBIUMS:** many species will now have perfected their pseudo-bulbs for the season; let such be immediately removed into a cooler house, and have no water given them. Other kinds will require the same treatment as soon as the full growth is attained. **GROWING PLANTS** may still be retained in the warm, moist atmosphere of the orchid-house, and be kept moist at the roots. **HEAT** in this month may be reduced a few degrees. Sudden changes are always dangerous; by gradually reducing the heat, the plants become inured to the change. **INSECTS,** search for diligently, and destroy; every one destroyed now will prevent myriads from being bred next year. **LELIA AUTUMNALIS** will be growing rapidly; keep it well supplied with water, as upon the strength it acquires during this month will depend the number of flowers on the spike in October or November. **REST,** give to all plants that have made their annual growth; without this they would continue to grow and never flower. **SHADE** may be much reduced now, except on very bright days during the beginning of the month. **WATER** continue to give to growing plants till the year's growth is completed, then withhold it, excepting from a few species with pseudo-bulbs, which, not having that storehouse of food laid up, must have occasional dampings and sprinklings.

T. APPLEBY.

PLANT STOVE.

AIR, give abundantly on all favourable occasions. **ACHIMENES** going out of bloom place in cold pit, giving water to induce them to go early to rest. **ACHIMENES PICTA**, continue to grow on, to flower at Christmas. **CLIMBERS,** on the rafters, commence to reduce greatly, by pruning off all superfluous shoots, tying the rest in neatly. In pots trained on trellises, these would be greatly benefited by being placed out-of-doors, in some sheltered nook, for a week or two at the commencement of this month; when set out, lay them on one side on a grass plot, and give the leaves on the under side a severe syringing. This would clear them of the red spider, at all events. **FRAMES** containing stove-plants must now be covered up every night with double mats; uncover early, and lift up the light for a minute or two to let out the foul air, and let in fresh and sweet; give these plants water only in the morning. **GESNERA ZEBRINA:** those started early will now be in flower; keep the rest growing by keeping up a heat of 72° or 75°, and supply water in a tepid state in due proportion. Other kinds of **GESNERAS** and **GLOXINIAS** gone out of bloom place in cool frames, and withhold water, to cause them to grow gradually to rest; plants of this kind struck in the spring will now be in flower; keep them in the stove, and give water. **PLANTS,** generally, that have bloomed, give less water and heat to. **WINTER-BLOOMING PLANTS,** give every encouragement to, to cause a fine bloom. **SOILS,** procure and prepare for use by frequently turning them over; keep them clear of weeds at all times.

T. APPLEBY.

FLORISTS' FLOWERS.

ANEMONES, plant in rich, light soil. **AURICULAS** and **POLYANTHUSES,** remove towards the end of the month into winter shelter; take the opportunity to cleanse and top-dress slightly. **CARNATIONS** and **PICOTTEES,** take off layers, and pot them in pairs in four-and-a-half-inch pots; such layers as have not rooted, pot, and place in a frame, kept close, till they root. **CHRYSANTHEMUMS,** give liquid-manure to; place in the greenhouse a few that show bloom, to flower early; protect from early frosts, should any occur. **CINERARIAS,** pot, and advance a stage. **DAHLIAS,** continue to protect the blooms from sun, rain, and insects; keep them well tied in, to prevent the autumnal winds from breaking off the side-shoots. **FUSCHIAS,** in pots, gone out of bloom, remove out of the greenhouse, and place in a situation where severe frosts will not reach them; under a stage in the greenhouse, or in a cold pit, will do. **IRIS** (bulbous), plant latter end of the month, in rich borders and beds. **LAYERS**, of **CARNATIONS**, **PANSIES**, and **PINKS**, take off as soon as rooted, and pot. **PINKS,** prepare the bed or beds, to plant out layers in; mix freely the soil with well-decomposed littery dung and leaf-mould, plant the pipings or young plants out towards the end of the month. **RANUNCULUSES,** if not all taken up, must be done instantly, or the autumn rains will start them into growth prematurely; examine roots of, taken up previously, and if mouldy lay them in the sun to dry more effectually. **ROSES,** cut off all decayed blooms as they occur. **TULIP-BED,** prepare, by adding dung to the soil, if not exhausted, or by making an entire new bed; see that it is well drained, and place two inches of cow-dung over the drainage.

T. APPLEBY.

KITCHEN-GARDEN.

ANGELICA, thin out, and earth-stir in the seed-bed, where the plants may remain until the spring. **AROMATIC POT HERBS,** finish gathering. **ARTICHOKES,** break down stems, and keep clear of weeds. **ASPARGUS-BEDS,** weed. **BALM,** cut, and dry. **BEANS,** keep clear of weeds, and seed collect, and dry off well; store them away in the pods. **BEEF,** take up as wanted. **BORAGE,** earth-stir amongst, and collect seed. **BORE-COLE,** plant out, and use the hoe freely amongst. **BROCOLI,** plant, and keep the earth stirred in fine, dry days. **BURNET,** plant. **CABBAGES,** plant out; keep the seed-beds free from weeds, and earth-stir. **Red Dutch Cabbages** are ready for pickling. **CARDOONS,** earth up well in dry weather. **CARROTS,** attend to thinning and earth-stirring the August-sown crops. **CAULIFLOWER PLANTS,** prick out in rich, open, warm borders, so as to have a good choice of plants to stand the winter. **CELERY,** earth-up freely in dry weather; let the earth be well forked-up and broken to pieces previously to spading it up to the rows, and plant out successional crops, which will be found very useful to the cook during the winter and spring months. **CHEERVIL,** sow. **COLEWORTS,** plant out. **CORIANDER,** sow. **CORN SALAD,** sow. **CRESS**, (American), sow and plant. **CUCUMBERS,** attend to in pits and frames, top and clear away all decayed leaves, &c.; strike cuttings of favourite kinds, or sow seeds for winter and spring growth. **ENDIVE,** plant out plentifully; tie up, or otherwise cover up to blanch. **FENNEL,** plant and cut down. **HOEING,** attend to in all cases in dry weather, and be the more attentive to this between heavy showers. **HYSSOP,** plant. **JERUSALEM ARTICHOKES,** keep clear of weeds; do not injure the stems; take up roots if required for use. **KIDNEY-BEANS,** earth-stir among, and collect seed; put away dry in pods. **LEeks,** plant and earth-stir. **LETTUCES** may still be sown in warm borders, but attend to those which were sown at proper time; prick out from the seed-beds; keep them clear from weeds, so as to have a good winter supply of sturdy plants; tie up full grown. **MELONS,** be sparing with water at this season; give plenty of air to ripening fruit; keep up warmth by backing up with linings, &c.; shut up early. **MINT,** still cut and dry. **MUSHROOM SPAWN,** collect; this is often found when breaking up old hotbeds; put it away in close, dry sheds until wanted. **MUSHROOM-BEDS,** make; this is the best season in the whole year for making mushroom-beds in any way, from the proper mushroom-house to the common span-roof bed in the open air to be covered with straw. **NASTURTIUMS,** gather as they become fit for use. **ONIONS,** press down to promote their bulbing, and take up those that are ripe; dry well before storing away for winter; attend to the August-sown; weed and earth-stir. **POTATOES,** take up and store away, and should be looked over shortly and often, after being taken in, until all the diseased ones are removed. **PARSLEY,** cut down and transplant in some warm corner for winter supply. **PEAS,** look after birds and collect seed of, dry them well, and store them away in their pods. **PENNYROYAL,** cut and dry. **MARJORAM,** the same. **RADISHES,** sow in warm borders. **RHUBARB,** clear from weeds. **SAGE** and **SAVORY** may be planted. **SAVOYS,** plant and earth-stir. **SEAKALE-BEDS,** keep clear from weeds. **SEEDS,** gather of all kinds as they ripen. **SMALL SALADING,** sow. **SORREL,** plant. **SPINACH,** sow in warm border; attend to thinning-out the August-sown crops from six to eight inches apart in the rows. **TANSEY** and **TARRAGON,** attend to if required. **THYME,** plant. **TURNIPS,** sow of the best early kinds; thin and hoe advancing crops. **WATERCRESS,** plant. **WATERING,** in dry weather, must be particularly attended to previous to planting, or pricking-out any kind of young plants, or sowing the same. Water well, both before and after. **ATTEND** to earthing-up, earth-stirring, and hoeing in general, in dry weather; the rake may be advantageously used in many cases after the hoe at this catching season of the year. Many good managers only plant **CABBAGES** in one week of the whole year, and that in the first week in September, and from plants sown about the 21st of July; the soil to receive them should be made thoroughly rich. Others make a good planting at this time, and another in March, which will give an excellent supply for the whole year.

T. WEAVER.

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WEEKLY CALENDAR.

D M	D W	SEPTEMBER 4—10, 1855.	WEATHER NEAR LONDON IN 1853.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in Inches.						
4	TU	Convolvulus Hawk Moth.	30.351—30.302	80—35	E.	—	18 a 5	40 a 6	10 26	23	0 58	247
5	W	Death's-head Moth.	30.421—30.410	68—36	E.	—	20	38	11 20	24	1 18	248
6	TH	Humming-bird Moth.	30.378—30.236	73—38	N.E.	—	21	36	morn.	25	1 37	249
7	F	Oak Egger Moth.	30.237—30.206	76—46	E.	—	23	33	0 a 23	26	1 57	250
8	S	Great Prominent Moth.	30.221—30.176	67—43	N.E.	—	24	31	1 34	27	2 18	251
9	SUN	14 SUNDAY AFTER TRINITY.	30.174—30.139	68—32	N.E.	—	26	29	2 45	28	2 38	252
10	M	Pale Prominent Moth.	30.191—30.101	68—33	N.E.	—	28	26	3 56	29	2 59	253

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 69.1°, and 48.1°, respectively. The greatest heat, 83°, occurred on the 5th, in 1848; and the lowest cold, 30°, on the 4th, in 1850. During the period 101 days were fine, and on 95 rain fell.

THE FRUITS AND FRUIT-TREES OF GREAT BRITAIN.

NO. IV.

THE STOCKWOOD GOLDEN HAMBRO' GRAPE.



SCARCELY a season passes in which we have not something new in the way of fruits; but it rarely happens that they possess anything more than novelty to recommend them. The mass of new fruits puts us in mind of that host of rhymsters, who, having only a dreamy vision of Parnassus, never reach it, yet, nevertheless,

fancy themselves poets. But as it rarely happens that we have more than one good poet, or two, at most, in a generation, so also, if we obtain one or two, really good, enduring new fruits in the same period, we may be thankful. Within the last twenty years we have had "Victoria," and many other sorts of Hambro', all of which made a great noise in their day; but they were soon forgotten, and men betook themselves to the old Black Hambro' again. The variety which we have this week chosen for our subject is one which is not likely to be so soon forgotten, but which, there can be no doubt, will be as enduring as its parents, the old Black Hambro' and the White Sweet-water.

The STOCKWOOD GOLDEN HAMBRO' was raised from seed by Mr. Busby, the excellent gardener to S. Crawley, Esq., of Stockwood Park, near Luton. It was not obtained by chance, as many of these things are, but was the result of a careful process of hybridization, which was pursued with the view of obtaining just such a result as has been arrived at. It was raised from the *Black Hambro'* impregnated with the pollen of the *White Sweet-water*. There was only one flower impregnated, and the operation was successful; a fine berry being produced, which contained five seeds, four of which vegetated. Two of the plants were thrown away; one was destroyed by accident; and the survivor is the variety which, through the kindness of Mr. Busby, we are enabled now to introduce to our readers. The growth of the vine bears a stronger resemblance to the male parent than to the Hambro', being short-jointed in the wood; but the foliage is more similar to that of the Hambro', being large, five-lobed, and the veins and footstalks tinged with red. The bunches are large, loose, branching, and shouldered, varying from six to nine inches in length, and the footstalks are short and stout. The berries are large, and hang loosely on the bunches, an inch long, and seven-eighths of an inch wide, and of an uniform oval shape. The berry stalks are rather long, stout, and considerably warted. Skin thin and tender, of a pale yellow colour, but, when highly ripened, of a pale amber. Flesh delicate and melting, very juicy, and remarkably rich, sugary, and vinous, leaving on the palate a full and luscious flavour. Each berry contains from two to three seeds.

Our figure is taken from a bunch kindly forwarded to us by Mr. Busby, and although our space would not admit of a full representation, still there is sufficient to show the character of this excellent new fruit, which is,

without doubt, "the best of all the white Grapes except the Muscats."

NEXT among the plants named in our version of the Bible is THE BULRUSH. Its Hebrew name, *gema*, is thus translated in two or three places in our version; but in Job viii, 11, it is rendered Rush—"Can the Rush grow up without mire?" but wherever the name *gema* occurs as a proper name, there is no doubt that it signifies the *Papyrus antiquorum*, or *Cyperus papyrus* of modern botanists, which is the Papyrus rush, or plant of which the Egyptians constructed their paper.

It is no objection to this conclusion that the mother of Moses, when she committed him to the waters of the Nile, constructed the boat, or ark, of this *gema*, or that the prophet threatens woes to the nation "that sendeth ambassadors by the sea, even in vessels of *gema* upon the waters" (*Isaiah* xviii, 2). This is no objection, because we find that such vessels were "daubed with slime and pitch" to render them impervious by the water (*Exodus* ii, 3); and boats of such light materials as reeds and osiers are common in various parts of the world; and Pliny tells us that in his time, 1,800 years ago, the Egyptians still employed the Papyrus for this purpose. He says of this plant—"The Papyrus grows in the Egyptian marshes, or in the stagnant waters of the Nile, not exceeding two cubits (three feet) in depth, its root spreading, and of an arm's thickness; its stems three-sided, and not more than ten cubits in length, gracefully tapering, and ending with a head of a thyse form;" or, as old Philemon Holland paraphrases Pliny's words, *thyrsi-modo*, "a head inclosed and round in manner of a Cabbage." In that thyse-like head, says Pliny, "there is no seed, nor is it of other use than with its flowers to form coronets for the Gods." In this statement he is incorrect. The seed is abundant, though very small. Its lofty position, and the thickness of the head of the flower, observes Professor Martyn, seem to have needed the extraordinary covering it has to protect it from the violent hold the wind must have upon it. For the same reason, the bottom of the filaments composing the head are sheathed in four concave leaves, which keep them close together, and prevent injury from the winds getting in between them.

"The Egyptians," continues Pliny, "employed the roots of the Papyrus in place of wood, not only for fuel, but in the formation of household vessels. From the same Papyrus they wove (*texuntur*) rowing-boats (*navigia*), and sails from the bark, and curtains, and clothing, and carpeting, and cordage. They eat it also both raw and boiled, but swallowed only the juice. They prepared from it sheets of paper (*chartæ*), divided, by means of a sharp-pointed implement, into films excessively thin, but as broad as possible." (*Natural Hist.* l. xiii c. 11.) Remarking upon these particulars, Professor Martyn observes, that boats made of Papyrus stems and leaves are now the only boats that they have

in Abyssinnia, where they are called Tancoa. The chewing of the root is also practised in Abyssinnia, where the people likewise chew the roots of Indian Corn, and of every species of *Cyperus*. The *navigia* of Pliny are the *cymbæ* of the poet Lucan; and that the Papyrus was certainly employed for constructing such vessels has been verified by late discoveries of paintings in the Egyptian sepulchres. In these, men are frequently represented making rafts of rushes; and in Upper Egypt the peasants still use them, indiscriminately with the stalks of the Doura, in crossing from one side of the river to the other (*Archæologia*, xvi., 176).

The paper was made in the manner following. The thick part of the stalk being cut in halves, the fibrous parts between the pith and the bark were stripped off, were squared at the sides so as to resemble a ribband; then, after cutting to the length desired, were laid upon a smooth table, lapped over each other after the manner of putting on tiles, similar ribband-like pieces were placed across them and similarly overlapping. A heavy pressure, by means of weights, was then put upon them whilst moist, and the gummy juice thus forced out caused the whole, when dry, to unite in one uniform sheet. Paper, within a century from the present time, was thus manufactured in the Island of Madagascar.

In Syria, the plant is called *El Baber*, from which is easily to be discerned the derivation of the classic name *Papyrus*, and our own word *Paper*.

In the 16th volume of the "*Archæologia*," Mr. Hamilton gives a very interesting account of the mode adopted for unfolding, without injury, an ancient roll of Egyptian Papyrus, found inclosed in asphalt with a mummy at Thebes. This was in the year 1812, but it was reserved for a still more recent period to reveal the intensely interesting contents of these Rolls.

As an example, we may epitomise the contents of an essay read on the 20th of August, at the Congress of the British Archæological Association, held at Newport, in the Isle of Wight. This Essay was by the Rev. Mr. Heath, and related to the Jewish exodus, as illustrated by certain Egyptian papyri translated within the present year. In these papyri many points of the political history of Egypt at the time of the exodus are treated of, and are strongly corroborative of the Mosaic account. Thirteen hieratic papers have been published by the British Museum, of which five more or less illustrated the exodus, and portrayed the events of the day and the customs of the country. From the narrative it would seem, that just previous to the exodus Rameses was succeeded by his son Seti II., the old playfellow and reputed first cousin of Moses, but that Prince being addicted to intemperance, and being unable to curb the turbulent people of Palestine, who had been subdued by Rameses the Great, retired for thirteen years to Ethiopia, leaving the government of Egypt in the hands of Meneptah. At that time the Jews appeared to have been engaged upon some extensive fortifications, under the superintendence of a naval officer, and a high Egyptian scribe, named Euna, appeared as num-

bering the Asamite population. They seemed at that time to be particularly unruly, and two women, from separate fortifications, addressed themselves personally to Euna and obtained leave to proceed to a place called Neht Hotep for a great festival. They then desired that the whole people should go with them, and, after some difficulty, Euna consented, but insinuated, according to the papyri, that it was the naval officer who was responsible for the valuable garments taken by the people from the public stores. It thus appeared that the slave population of the Delta were allowed to go into the Wilderness certain days in the year for their national festivals. The spoiling of the Egyptians appeared to be the abstracting of the rich robes in which the religious ceremonies were performed, and a singular fact was thus brought to light, that the Israelites worshipped in the same vestments as the Egyptians. The narrative then went on to trace the operations of the people, and concluded with a poetical lament for the death of the King's son, one of the very first poetical Egyptian pieces ever discovered.

VISIT TO TRENTHAM HALL.

HAVING long desired to see the glories of the famed Trentham Hall gardens, I sought an opportunity, last week, about the period, as I thought, of seeing everything in high perfection. Everybody knows that Mr. Fleming is the head-gardener, and everybody has heard of his skill and perseverance. I had formed the highest opinion imaginable of the beauties of Trentham, and had fancied that—knowing full well the high character British gardeners have attained, even under adverse circumstances—I could tell pretty well what to expect. The picture, however, when seen, proved to be far beyond the ideal conception I had entertained.

I really am at a loss what to say first of this splendid place, which is, indeed, princely in every respect, both as regards the mansion, the gardens, and the park.

Mr. Fleming, with great courtesy, sacrificed about four hours in showing me the features of the place, but I find, that after traversing about continually thus long, I had by no means seen all. I am aware that it is not a very easy affair to do justice to such extensive gardens; to do so in detail would require that those who were bold enough to attempt it should spend a couple of days taking notes. My present desire, however, is to point to a few of the most remarkable features, or, as our plantsmen say—"selection, not collection."

We may, for simplicity's sake, just divide our remarks under sections, viz.:—Landscape and Flower-gardening; Plant Structures and their inmates; Fruit forcing; and Hardy Fruit culture. As for the landscape about Trentham, in its own native character it is neither picturesque nor beautiful; almost everything has to be created. Indeed, were it not for the noble masses of timber, which crown or flank the sides of the higher grounds by which it is surrounded, the locality would wear but a barren aspect; but much has been done by art to give expression to the scenery. After wandering through the intricacies produced by the different levels, descending from the terrace, and after descending sundry massive flights of steps, the flower-gardens burst upon you in refulgent beauty; the atmosphere all the while teeming with sweets. Garden after garden, where, as Loudon said, there was a bold avowal of art, greet your steps, all as rich as a fairy land, and from such you gradually emerge by almost imperceptible

gradations, until at last you discover that you are in the country, approaching immense hill-capped plantations of old England's favourite tree, "the gnarled and unwedgable Oak."

Mr. Fleming has, with a high appreciation of landscape gardening, most judiciously converted a hitherto unmeaning extent of ground into a sort of middle distance,—what I must call transition ground; and which I hold to be indispensable, as connected with all grounds of any extent, and even attainable in degree in the very suburban villa.

This transition affair is, of course, occupied by huge masses of intermediate character, all possessing strong features, and ultimately leading you up to the river Trent, which passes through the grounds. Here Mr. Fleming has done wonders. The Trent, in this part, was formerly, it appears, almost growing up with mud, but Mr. Fleming bent the course of the river, cleansed it in a singularly off-hand way of its impurities, and gave new life to this locality.

Much of landscape ingenuity is to be found in these portions of the grounds; devices which escape, perhaps, the majority of "lookers-on," but which at once show to those conversant with the higher order of landscape gardening that Mr. Fleming has not only read and seen, but also felt.

That bewitching power of genuine landscape-gardening, the endless creation of attractive features, without destroying what our painters call "breadth of effect," may be easily recognised in this portion of the grounds. Half-concealed views, and that delightful intricacy of outline which keeps the mind ever alive through a kind of indefiniteness; these, and more, may be found in this department at Trentham. The flower-gardens are, indeed, splendid, and exceedingly extensive. I do not remember seeing a blank worth notice, so well laid had been the plans of the preceding spring. What is termed the ribanding system is here carried out with a high hand. But I must pass on to plant structures; these are to be found there in almost every conceivable variety; and I may here observe, that Mr. Fleming has shown excellent tact in rendering them interesting. He has created much diversity in appearance by the way in which he disposes of his plants; he certainly is no stiff adherent to the old staging-system, when the plants were placed as though shorn to a level. One conservatory, indeed, struck me as being a model of its kind; here all was intricacy, and outline, and variety, so much so, that the mind could scarcely conceive a boundary. In this there was an aquatic tank, over which the beautiful *Cissus discolor* festooned in the most fantastic and playful forms. I was informed that an artist had been down from London to sketch it, in order to produce some decorative affair for the mansion.

Mr. Fleming has immense stocks of Camellias, Epacrises, Rhododendrons, and, indeed, most of our finest families of plants, especially those adapted to bouquet-making; this being a matter of great importance at Trentham. All these things were in "high feather," and showed unmistakable signs that the cultivator had exactly measured his length, for they were set for bloom at every twig, and were, in fact, mostly undergoing a sort of rest, preparing for future blossoming.

As for fruit forcing, the extent as to some kinds is amazing. I speak here more particularly with regard to Peaches. But a great portion of these are in a kind of structure which I have not before seen, although I have heard it described. It consists of a perpendicular glass frontage, placed parallel with a wall at about five feet distance, and running up nearly, or quite, as high as the wall itself. A span glass roof connects the perpendicular frontage with the wall, and in the apex of this span an excellent graduated opening is afforded for the exit of superfluous heat. There is a kind of move-

able luffer boarding—if I may be permitted to call it so—at a very low level in front, for the admission of fresh air during stress of weather; whilst, in order to persuade the trees they are quite at home in their own land, a great portion of the perpendicular glass frontage moves on rollers with such ease that a child might work it; thus throwing the house—if such I may term it—almost open to the outer atmosphere. But another point may be named; these openings, which, worked upon the old plan, would require much time to open and shut, are worked by what has been termed a sympathetic movement; that is to say, a magic twist of a kind of windlass, at one stroke, throws open the frontage for some twenty yards at a move.

The Peaches, Nectarines, &c., are progressing in a capital way; no Red Spider here; and I venture to prophecy, that before two years have passed we shall hear of cart-loads of Peaches instead of dozens.

Pines are grown in what I call first-rate style; and I should say are, in appearance, what we might fairly fancy them in their happiest moods, in the best of their native climes. With his Peaches, Mr. Fleming tries hard to persuade them they are out-of-doors.

Mr. Fleming has some splendid specimens of Grapes: Hambro' up to any mark; Muscats, monsters; and I must here point to a new French Grape, of a sort of brick-colour, which Mr. Fleming thinks will make a useful addition to the dessert table, both as to colour and character.

I must now say a little about the culture of out-door fruits, which is quite up to the best conceptions of the day, as our readers may imagine. There are five lines set out for the culture of choice Pears on the wire training system; they are alternate, the globular and the reverse, or umbrella training; these have an excellent effect, and appear in a very fruitful condition. Then we have a long perspective of Pears, in the shape of an arcade, which has a most imposing effect, to say nothing of the luscious treasures with which it is loaded. Apples, too, may be seen rank and file, like so many soldiers, and quite as much systematised as red coats under drill. They are chiefly trained in what has been termed the punch-bowl fashion, and really they seem to enjoy that mode of handling much.

Of course, the walls are full of fine Plums, Pears, and, indeed, every good thing; but to particularise all in this princely place would be no small task. I merely profess to have taken a glance at a few of the good things. To those interested in the very highest order of general gardening, I would say, try to see Trentham.

R. ERRINGTON.

DAVENTRY GOOSEBERRY AND CURRANT SHOW.—The third annual show of the above society took place on the 14th of August. Owing to the lateness of the season, and a continuance of wet weather immediately before the show, the berries were not so fine as usual, nor did they ripen so kindly as they would have done with a little more sunshine, so necessary to the growth of large berries. The following is the award of the chief prizes:—

GOOSEBERRIES.—Heaviest berry of any colour: steward's prize—a teapot, *London*, 24 dwts. 10 gr. (extra prize, 2s. 6d.), Mr. R. Watts. Two heaviest: steward's prize—a bell-metal tea-kettle, red, *Wonderful*, 19 dwts. 1 gr., green, *Thumper*, 17 dwts. 21 grs., Mr. Geo. Thompson, Buckby. Premium by Mr. Watts—a tea-kettle—for four heaviest berries of distinct colours: red, *London*, 18 dwts. 18 grs., yellow, *Gunner*, 20 dwts. 1 gr. green, *Overhall*, 18 dwts., 17 grs., white, *Lady Leicester*, 20 dwts. 10 grs.

CURRANTS.—Premium by Mr. Wise—pair of hyacinth glasses—for the best half-pound of Red, and best half-pound of White Currants, Mr. R. Watts. Premium by

Mr. Thos. Abbotts, of 2s. 6d., for the best pound of Black Currants, single berries, Mr. T. Kilburn. Unfortunately, several of the exhibitors sent in their fruit weighed a little too fine, some dishes containing several penny-weights short of the pound, which, consequently, disqualified them, or the whole of the prizes offered would have been taken. One dish of Black Currants, exhibited by Mr. C. Lee, lost the first prize from the above cause, being far superior in point of fineness to any at the show; and the committee trust that in future exhibitors will be careful in sending sufficient weight, as they much regret that any competitor should be disqualified.—*Northampton Mercury*.

STOPPING ROSES AND OTHER PLANTS.

If the points of all the young wood in the kingdom could be suddenly stopped next week, and if every attempt at growth nearer the roots could be arrested with equal promptness; and, moreover, if every leaf and shoot which casts a shade over another leaf or shoot could be removed at once, that is, next week, what would remain for the pruner to do next winter?

Instead of attempting to guess what the pruner would have to do under that or any other plan, let us rather see what would be the consequences of the adoption of a general move for arresting the growth of a season so early, and for thinning the shoots and leaves of all trees and plants to such a degree as that not one of their number could hurt any of the rest by keeping the sun from it. The first way in which we should feel such a general use and application of a sound principle would be in the want of *Roses* for the rest of the autumn; because, every Rose shoot which is stopped after this week will not be able to make another growth this season of sufficient strength to produce flowers worth looking at; therefore, I would not advise any one to meddle with Perpetual Roses after the end of August, with a view to improve their shapes, or to get more flowers from them this season. From the end of May to the middle or end of August, a practical hand can do a great deal for improving the Rose-tree in shape and bloom, by stopping, by thinning the flower-buds, by shortening such shoots as have flowered, by thinning out weak shoots, or even strong shoots, if they get too much crowded from recent growths, and by keeping down all flies and caterpillars, and all eggs of insects; but after we get into September this work must cease, except the part of it which looks after the grubs and insects; and, provided the plant is not over-crowded with leaves and shoots, it is best to leave it to itself for the rest of the season.

One thing is certain, however, and that is, that early in September is the proper time to prepare tender Roses for standing against the frost next winter, and the preparation is simply to see that the plant is not crowded in any part; and if it is, prune away the over-crowded shoots at once; depend upon it, the grand secret of having *Peaches* and *Roses* next summer is to see that every shoot on each tree and plant can see the sun, from top to bottom, once a day, at least, or all day, according to the position of the shoots, from the 1st of September to the fall of the leaf. But I would sooner believe that the Russians would gain the day, than that there are two Peach-trees and two Rose-trees in every parish in the country which have ever yet been one-half so thin of leaves and shoots at this season as they ought to be, unless they happen to be under the care of a good gardener. Every body else, as far as I can see, have their Roses and Peach-trees more than twice too thick of leaves and young, useless wood, both of which do immense damage, from this day forth to the

end of the season; and instead of covering such trees next spring to save flower-buds and young wood, they ought rather to be covered from the end of October to the beginning of the new year, in order to keep them from the cold, and to have them well-ripened before the hard winter sets in; but if the plants and trees were so managed that the sun could reach every inch of them from this day forth, very little covering would be needed against winter or spring frosts.

I do not know a single kind of bush, or tree, which is hardy enough for the open air in this country, or which we grow out-of-doors, that would take any hurt if one-half of every leaf on it were cut off any day after the 1st of September, and that would be the same as if every other leaf were picked off entirely, all over the plant. I have done that, and also cut the leaves in halves, many a time, at this season, with the best possible results; but for the last five-and-twenty-years, you might do as you would with pruning, so you did not hurt a leaf; but if you happened by chance to cut a leaf in two, philosophy was down upon you, tooth and nail. So it was not fashionable to write about thinning the leaves off a plant at all. The consequence is, at the present day, that one-half of those who employ men-of-all-work for gardeners, and almost all the men-of-all-work themselves, who learned what snatches of gardening they practice from the books of that period, are both of them all but in the dark in respect to the use and abuse of leaves; and their trees, at least their pruning, show, as clearly as the evidence of the senses, that they do not understand the value of this or that system of managing trees under different circumstances; that all that they know of pruning is, that so much should be cut off from every tree according to its size, and that a difference in seasons, soils, and situations, cannot alter the rule without altering their whole system, and that would be equivalent to a dead stop; so that the bad practice of having four times more wood and more leaves on a plant than it ought to have, is now become a national idea amongst all but the best gardeners, and even they, when they get into nursery business on their own account, are obliged to humour the public taste, and give four times more for their money to the public than is good for the said public, if they could but know it; and to make up for one's qualming of conscience for such doings, they have the certainty that their customers must call four times oftener than they need have done, and buy four times as many plants as there would be any occasion for, under a common-sense way of managing Roses and all other plants.

Just go and look at Mr. Rivers's Orchard-house pots and plants, and see if they are as crowded and as full of plants, and shoots, and leaves, as he must needs have his out-door stock, in order to please his customers, who, if they took a right thought, would soon perceive that a tree out-of-doors, in England, ought to be only half as crowded with leaves and shoots as another tree of the same kind under glass, because the latter has the advantage of a much better climate; whereas, the case is just the contrary;—thin trees under glass, and crowded trees in the open quarters, not only with Mr. Rivers, but all over the three kingdoms; you might say universally in this country, for the few amateurs who know the difference, and those gardeners whose time will allow of good tree-culture, are as drops in the bucket, compared to the great mass; but that is not the worst of it, for common-sense views have to be hammered into the ears of the nation for half a life-time before an impression is made against any one practice, however absurd, which had obtained universal consent.

To begin at the beginning. I would advise that all *Roses* which had been budded in the former part of this season should have the shoots now shortened down to

within eighteen inches of the new buds, and that the tying over the buds should be loosened, but to be tied over again, only not so tight as at first; this will allow of the proper swelling of the parts, and the cutting off of the top part of the shoots will throw the force of the sap more into the lower buds, and into the new bud more particularly; after that, the whole may stand over till the turn of the new year, or till the end of February, when the ties may be taken off altogether, and the shoots shortened to within six inches of the new buds; and if there are eyes between the new bud and the top of the stump, to have them picked out with the knife. I never like to have the shoot cut down close to the new bud at the spring pruning, not till just after Midsummer; meantime, the piece above the bud is the readiest support to the young shoot from the bud, which is so very liable to be broken off by the wind if it is not tied to something for support. Besides, we may suppose that a certain quantity of the rising sap will go up above the new bud before the bud starts, but finding no vent that way, from the eyes being taken out, it accumulates there till the starting of the bud, and then helps it materially just at the proper time. About the end of May, or when the new shoot was just six inches long, I would stop, by pinching off the very point; and I hold this to be the true way of dealing with all buds which are intended for dwarfs or for training, whether they are *Rose*-buds, or *Apple* or *Peach*-buds; and those who neglect to do the same are only laying the foundation of a very bad practice; although it is all but universal.

If all the *Rose*-buds and *Peach*-buds were stopped at from six to ten inches from the start, and a sufficient number of the shoots which would spring immediately into line were trained in according to the design of the manager, we should get rid of the most absurd practice of the present day, and of this and the last century;—I mean the cutting down of maiden plants the first winter after they are worked. I care not what the kind of plant may be, I hold the practice to be the very opposite of good management. A man who struck a cutting of a *Geranium*, or a *Salvia*, or a *Fuchsia*, in the spring, and let his plant from it to run up with one shoot only all that season, in order to have the opportunity of cutting it down to within so many inches of the pot, so as to have a bushy plant made of it next season, would be talked of as a fool, and nothing else, by all who know that his plant ought to have been stopped over and over again the first season, and be brought up bushy at once, and no severe cutting at all should be practised with it from first to last. Now, if you just take a thought on the matter—is there any real difference between a shoot rising from a cutting, or from a bud, or even from a seed? None whatever, in the eye of reason; and of the law itself, the three are all as one; then why should the second—that from the bud—be treated exactly on a contrary system, and that the worst system to the bargain? Why, because “it used to be done so.” Well, you may have your own way, but you will never be a good pruner till you learn what did not use to be as well as what did. Again, here are all these *Roses* against that wall; what do you mean to do with them this autumn? They “used” to be nailed in here and there as often as they needed tying; but that is not the right way; my word for it, they will be full of insects and all manner of blights next year if you will let them go on so.

Just order the ladder up against them, and let us see if we cannot put them better on their legs; their case is serious, and we must act accordingly. First of all, the law lays it down that every trained shoot in Great Britain ought to have its top stopped before the 10th of September. Since that Act passed, however, we had *Noisettes* and *Perpetual Roses*, and to

comply with the said law on them would be madness itself. Many of them would flower for six weeks longer, if they were to be exempt from the operation of the pruning clauses of the Act; therefore, we must except them, certainly; still, we must thin them, and not let the little shoots flower any more this season; for if we do, we shall never get rid of blight and what not. I recollect when the first Noisette Rose was a new Rose, and that was the very first plant I ever saw pruned so early as September—that was in 1827; the Rose was then some years old, and had filled the wall; but, after flowering all the summer, a large number of suckers began from near the bottom; but without training them over the old parts of the plant there was no more room for them, yet these strong shoots were all showing for blossom at last, and something must be done, for the place was well kept; then it was that a new system occurred to the gardener; he unnailed the old parts of the plant, and cut out, one, two, and three years' old shoots down to the suckers, and nailed the suckers in their places, and you never saw anything answer better. That was in the Kinoul Nurseries at Perth. After that, I saw running Roses pruned exactly in the same way in the Botanic Garden at Edinburgh, as soon as the bloom was over, early in July; one was the *Dundee Rambler*, then rather new at Edinburgh; and the White Banksian Rose was always pruned there as soon as it went out of flower by the end of May; and I heard the substance of this letter discussed in Edinburgh the year before the Burk murders, between Dr. Niel, Professor Dunbar, and the Curators of the Botanic or Experimental Gardens there, and much more besides, which is now all but new to many of the present race of amateurs. From those days, I never hesitated to prune a Rose any week in the year; and if I do not know that wall Roses ought to be pruned early in September, I ought to be sent back to Edinburgh; and they say that would go much against the grain of a Scotch gardener.

Yes, all wall Roses ought to have a regular pruning, training, and nailing, just about this time, to get rid of old shoots altogether; to shorten or cut out entirely very weak shoots; to stop all shoots which are not to bloom in the autumn; to make room for those that will bloom to the end of the season, and to let in daylight to all parts of the plant, so as to ripen the wood most thoroughly, and at the same time to get it brimful of active sap before the fall of the leaf; all of which are as easy to do and to understand as any process in gardening, except, perhaps, the value of having all the cells, or vessels, of a plant well-filled with sap ere the leaf turns yellow; for that is only known yet to some of the very best gardeners, although the practice necessary for filling a plant in the autumn, so to speak, is as old as this century. It was first pointed out and experimented upon by the late President of the Horticultural Society, T. A. Knight, Esq., the best practical amateur the country ever produced.

D. BEATON.

PRICE OF FRUIT IN SAN FRANCISCO.—The climate of California is said to be well adapted for most kinds of fruit, and the following prices of fruit per pound in San Francisco indicates that fruit growing there must be at least as profitable as gold digging:

Cherries, 4 dollars; Strawberries, 2 dollars to 2 dollars 50 cents; Raspberries, 3 dollars to 3 dollars 50 c.; Currants, 2 dollars 50 c. to 3 dollars; Apricots, 1 dollar to 1 dollar 50 c.; Gooseberries, 1 dollar to 1 dollar 50 c.; Blackberries (plenty), 50 c. to 75 c.; Pears (new crop), 75 c. to 1 dollar 50 c.; Apples (new crop) 2 dollars to 2 dollars 50 c.; Apples (old crop), 1 dollar to 1 dollar 50 c.

Foreign Fruit, per dozen.—Oranges, 1 dollar to 2 dollars; Lemons, 4 dollars to 6 dollars; Limes (scarce), 3 dollars; Bananas, 1 dollar 50 c. to 2 dollars.

PLANTS FOR AUTUMN AND WINTER BLOOMING.

DURING the spring and summer months our efforts are chiefly directed to the growing of plants. Many of these flower and grow as they go on, the excitement to expansion, by the increase of temperature, being counteracted by the maturing and solidifying influence of the rays of the sun. These rays are still powerful, but we must soon use them as much as possible for maturing growth instead of continuing it; knowing that long months are before us, in which, whatever heat we may apply, we can have little of the sun's ripening influence. Much, therefore, of the future success in flowering and forcing plants in the winter will depend upon the maturing and hardening of their buds at an early period in autumn. This can only be accomplished by giving them the greatest quantity of sunlight that can be commanded, with the smallest amount of water that will just keep the leaves from at all flagging. Plants that have been growing freely must receive this check as to water, and this freer exposure to sunshine, very gradually, or they will suffer from sudden changes. Many with small fibrous roots, such as Heaths, Epacris, &c., will like all the sun and air that can be given them, as the best preventive against sickly growth, mildew, &c., hereafter; but if the pots are at all full of roots, these pots must not be exposed to the full influence of even a September sun, or the points will be scorched and burned up. The protection of earth-pits,—plunging the pots,—or surrounding them with some materials to keep the sun off them, will thus be an advantage. For the same reason, though the heads of the plants should be exposed in fine weather, shelter should be given from rains at all heavy, as the pots would get so soaked, that to get rid of the extra moisture the plant would be induced to extend rather than to ripen its wood. Hence, many amateurs, who keep their Azaleas, &c., in the shade, for the purpose of growing them rapidly and getting them to set their buds, fail in blooming them freely, because they continue the shade too long, and give not enough of unobstructed light thoroughly to ripen the buds. The same thing also takes place from shifting such plants into larger pots too late in the season. I have frequently shifted Azaleas in September, but the shift ought to be small at that season, as there is a risk of the plant growing on; and if the pot is not well filled with roots by blooming time, the bud is apt to become deformed, or to drop. When the ball, however, is very much pot-bound, and there is no room for surface-dressings, it is better to give a small shift than risk starved blooms; though, if not extra pot-bound in a small pot, it will be better to give a top-dressing, by picking away a little of the surface soil, and fresh potting earlier the following year. For moderately early blooming, the plants cannot now be got too soon out of the shade, and exposed fully under glass, or in the open air. If the latter, however, the change should be made gradually, choosing a dull day for the change, and even placing them in a somewhat shady place at first.

Camellias that are moveable should also be treated in the same way, and the flower-buds will be stronger and less liable to drop in consequence. Cold, heavy rains, however, are to be guarded against as well as the loss of sunshine, and housing should take place before the plants are greatly chilled. Many of the tenderer Cape, and Australasian hard-wooded plants, should be housed before the middle of October, unless the autumn be mild and favourable; as many misfortunes, in winter and spring,—the drooping of foliage, the dying and mildewing of shoots are greatly owing to a cold saturating of the roots in autumn; and especially if clear nights should take place afterwards, as the porous pots admit of such a cooling of the roots as next to freezes the soil,

though there be no appearance of frost in the ground in general; another reason for sheltering the pots of such plants, to secure them from sudden extremes of temperature,—heat from the sun, and cold from free radiation and evaporation.

The same principle applies, though in a less degree, to soft-wooded plants. Many persons are fond of Scarlet Geraniums, and other kinds, in winter, and wish to have them without anything approaching the trouble and expense of forcing. The cheapest and easiest mode is, to grow them in summer, allowing no, or few, flowers to perfect themselves; expose them fully to the sun in autumn; remove a few of the larger leaves that may harden the stems; and give just enough of water to keep the leaves from any signs of wetting; and a comparatively low, dry temperature in winter; from 45° to 50°, will cause plenty of blooms to be produced. In the case of florist and fancy Pelargoniums, it may be as well to keep in mind, that after being pruned, the plants should receive little water until the young shoots have fairly started, and that cuttings of well-hardened stems, though they do not grow so quickly as shoots more succulent and vigorous, will ultimately make the healthiest and best plants. In selecting even small shoots of bedding Geraniums for cuttings, they will succeed with less trouble, no trouble, in fact, farther than planting them in a border, if their succulence has previously been overcome by removing a number of the larger leaves which shaded and kept them from the influence of sun and air. These little matters, however trifling they may look, are next to everything to the young beginner, as success is more dependant upon them than on those seemingly greater operations that at once arrest the attention. In fact, much superior success in some departments in gardening is owing to some minutiae over-looked often by the operator himself, and the want of which little attention prevents another being so successful, though both may imagine they are following an exactly similar course.

There are others which now must receive every ray of sunshine, and yet not a particle of a check, such as late

Balsams.—These I have frequently had in fine order in September and October, from sowing in June, and thus they help to make houses gay in the autumn months, though little or no seed can be expected from them. With full exposure to sun they will take pretty well as much manure-water as they can drink. Then there are the large and small

Chrysanthemums, which must now have all the sunlight possible, the shoots being properly tied out, so as to secure air and light to them. Now is also a good time for laying the points of shoots of such plants growing in the borders, for the securing of very dwarf plants, and a number of these tiny plants, placed in one largish pot, produces a very good effect. Those planted out, intended to be potted, should be raised as soon as the flower-buds appear, doing so with care, so as not to injure the roots, and placing the plants in a shady place, watering them well, and then keeping down extra evaporation by the free use of the syringe, until the roots are working freely into the light, rich soil in the pot; when the plants should be transferred to a place full in the sun until they are housed for blooming. This latter is the plan that involves least trouble, and, if carefully done, secures the best plants, with leaves over the rim of the pot, as when struck and potted on-and-on in pots. Unless carefully attended to, one or several times neglect in watering will just be likely to deprive you of so many rings of the lower leaves, the retaining of which in full vigour constitutes one of the chief interests of the plant. Such a plant is not likely to suffer at the roots from a heated pot in an equal ratio with a Heath, and yet it will be advisable either partly to plunge the pots, or

to protect them on the side next the sun with some litter. At one time I grew these plants largely, for decorating, for the last time of the season, a cool veranda, and they generally kept on well till Christmas and the new year. The way of showing them off was a little peculiar. The plants were grown chiefly in pots; large pots for single specimens; but chiefly in smaller pots for filling largish vases. These small pots were chiefly 32's. As many as were required of these, of one kind, were taken out of their pots, and jammed as close as they could be made go together round the sides of the vase. This would have a slight opening in the centre, after all the rich earth possible had been trickled in between the jammed balls. In this centre, a plant of the same kind, but in a large pot, an eight, or a 12-inch pot, was jammed in, without taking it out of the pot. The pot was concealed with a little moss and the foliage of the outside belt of plants. This large pot in the middle elevated the centre, and a little tying gave the whole a uniform pyramidal appearance, increased frequently in large vases by small layered plants being used as an outer row. A top-dressing of manure was placed over all, and then a sprinkling of moss, and a good watering given. The work was done at the close of October, when the buds were swelling and opening, and at such a period the taking the plants out of their pots, and squeezing the balls together, produced no harm—did not, in fact, occasion the flagging of a leaf. It would have required a great amount of care and trouble to have grown any single plant, however large and old, to have equalled these elevated pyramids of bloom. As there was no means of heating the veranda, the earthy smell and damp so late in the season was objected to, and I have done but little with these showy flowers since.

Salvia splendens does well planted out, as the Chrysanthemum, from cuttings made in May or June. These should now be potted, and, as soon as they will bear it, innured to sunlight. Those grown in pots should now have plenty of manure-water and full sun, being syringed frequently to keep Red Spider at a distance. They will bloom well in a greenhouse, in October and the first part of November; after that period they would require a plant-stove or an intermediate house. Although losing their leaves the plants may be kept at the warm end of a greenhouse, beneath the stage, anywhere out of the way, to secure cuttings next spring. South of and in the climate of London, this plant makes a fine summer ornament planted out-of-doors. I never could make anything of it here. I also understand Mr. Snow fails with it at West Park, though I have often heard how splendid he used to have it on the lawn in Kent. Mr. Dawson, as already chronicled, succeeds with it as a standard out-of-doors, at Panshanger, near Hertford. As a pot plant it is a useful autumn and winter flowering plant in all parts of the country.

Salvia Gesneriflora.—This is just as beautiful a spring-flowering species, and is only more easily managed; may either be grown in pots, or planted out in summer, but requires plenty of sunlight now, and to be kept slowly growing all the winter. I have seen it a blaze of scarlet from March to June.

Salvia Fulgens.—This is one of the best for shrubberies and large flower-beds, and its dark red flowers are very passable in a greenhouse in winter. Cuttings made in June make nice plants for this purpose, either grown in pots or planted out in a border, and carefully lifted in September. Lifted later they are apt to suffer more in the foliage. This is less subject to insects than either of the other two; but future success will greatly depend on giving the plants full sunlight and plenty of air before housing for the winter.

Fuchsia spectabilis, and, at any rate, *Fuchsia serrati-*

folia, and *cordifolia*, make fine winter plants when turned out in a border in June and repotted in September; as soon as they will bear the sun without flinching they cannot have to much of it. A plant of *serratifolia*, in the winter months, is no mean object.

Brugmansias.—The whole of these, single and double, white, dark, and yellow, all bloom well in the first winter months, after being planted in the border in June, and repotted about the middle of September. Those in pots that bloomed in May, June, &c., if pruned rather close, allowed to break, repotted in rich material, and exposed to sunlight in September, will bloom well in November and onwards, if the temperature is high enough during the day to perfect the flower—from 50° to 60°.

Chinese Primroses.—These grow best during the summer in a shady place. In September they should receive their last shift into light, rich soil, and when taken with the pots be exposed to sunlight to get masses of bloom. Soakings of cold rains after this, of all things, ought to be avoided. House before the roots or the plants get much chilled.

Calceolarias, herbaceous, the first sowings should be pricked off; a sowing now will be early enough for late spring flowers, and require less room in winter. Where fine, shrubby specimens are required for blooming next spring and summer, a few may be lifted and potted now more safely from the beds than they will be two months hence. The difference is, that now they will make roots freely, and fill their pots before winter; a little pruning in autumn is all they will require to insure fine specimens next season. These plants, in stiffish soil, may be moved even in summer as easily and safely as a China Aster. I had a row of *Calceolaria amplexicaulis* lately, some six inches lower than I wished it to be, and large, flowering plants, too. I lifted the most of them with a steel fork, the hole was filled up above the level, the plant, with its ball of roots and earth, set down on the prepared surface, and then this exposed ball was banked up with fresh soil. The ridge thus formed being concealed by the dense line of plants on each side of the *Calceolaria*, and after receiving a good watering, the plants never showed the white feather by even a curled or flagging leaf, and the object was thus easily gained. I may also mention here, that when it is desirable to keep old *Calceolarias* plants from beds over the winter, and yet not move them until November, that instead of potting them, they will keep better and go closer together by pruning them a little, and setting the balls you can get close together in a frame, or cold pit, working a little fresh soil between them, giving a fair watering, and then, afterwards, as much air as the weather will permit.

Cinerarias.—Early seedlings should receive their final shift for early winter-flowering. Suckers and cuttings of favourite sorts should be potted for early-flowering. Seeds may yet be sown for late spring-blooming. This plant grows freely just before and after the shortest day. Full exposure to light, a pot full of roots, and a diminished supply of water, will encourage a show of bloom at any time.

Achimenes.—The first lots of these will now be over, but the due care is not over. The pots are too often huddled into a corner, as if they were of no importance whatever. Treated in this way, they will be sure to have their revenge—in weak growth and weak flowers next season. Treat the beautiful things as they deserve to be. When removed from the house, give them, if possible, a cold-pit, with glass over head, to rusticate in; if not, a nice, sunny spot, where heavy showers can be guarded against. The great object should be to give the stems and leaves (after the fine blaze of bloom is going) as much sunlight as they can bear, and to minimise the water, until, as the foliage fades, none at all is given. Enough of moisture will remain in the

pots to swell and mature the tubers, and if the sun beats for several weeks on these pots, after water has been withheld, the sounder and better ripened the tubers will be. This principle applies still more strongly to that beautiful plant, the *Gesnera zebrina*.

R. FISH.

WOOD-CRAFT.

(Continued from page 374.)

DESTROYING WEEDS.—Having in my last paper on Wood-craft, clearly, as I think, shown the necessity and prudence of summer-pruning, I now shall try to prove the no less important necessity of keeping under weeds; by which I mean all plants whatever that will impoverish the soil, and by their rampant growth choke the young trees.

The list of injurious weeds, plentiful in all neglected ground, is really fearful, by the great number of species, and the size they will attain if left to grow till they seed. The grand question is, how are they to be kept under and within bounds? Such weeds as Briers, and Brambles, or the common Whin (*Furze*), should be all rooted out at once—they are easily got rid of; but such weeds as Docks, and Thistles, the common Bindweed, Coltsfoot, and such-like deep-rooted perennial weeds, are ten times more difficult to extirpate. The editor of the *Gardeners' Chronicle* says, that perpetually cutting off the tops of Thistles, &c., will in time destroy the vital principle, or, in other words kill them. The truth of this assertion (for it is nothing more) is much to be doubted. I know a cottage gardener close by here, who has, for fifteen years, constantly kept that troublesome weed, the *Convolvulus arvensis*, common Bindweed, cut off as fast as it appeared, and it is still as lively as ever, and comes up every year. Yes; but says theory, he should never let it appear above ground. Granted; but that does not prove that it will ever be killed. I once tried, myself, to kill, or rather choke, that most pugnacious of all weeds, Coltsfoot. I had a piece of ground full of it. I had it trenched, and every perceivable bit picked out. The ground was planted with late Potatoes, a sort that had thick, strong haulm; it was kept closely hoed, not a leaf suffered to appear; then, as soon as the Potatoes were taken up, the ground was covered thickly with short grass from the lawn; and no covering is so effectual in preventing any weeds from growing. During the following summer, layer upon layer of this choker was laid upon the plot of ground, and not a leaf of the Coltsfoot made its appearance. Thus, for two years, the weed was apparently killed. The ground was then dug, and no roots could be found; I thought I had completely scotched the snake; but, alas! before the summer was over it came up again stronger than ever, and the plot was obliged to be given up as cultivatable ground, and sown down with grass. The cottager above alluded to, assured me, that in his occupation as a well sinker, he had found the roots of the Bindweed fifteen or sixteen feet deep. The whole district where I live is full of these perennial weeds, and it is a serious drawback on the profits of the farmer and the market-gardener the keeping them under. The cultivators have been waging war with them for centuries; and if any plot of ground is neglected for a single season, the crop of all the worst weeds we can imagine is really frightful. What, then, is the farmer and gardener to give up in despair? Certainly not. By the sweat of thy brow thou shalt earn thy bread (a curse that has proved to be a blessing in disguise), and wherever the sweat drops are most plentifully dropped upon the land, there the earth yields the greatest increase, the nation flourishes, and the people are contented and happy. Keep, then, the weeds down; by labour

constantly bestowed, without ever expecting the weeds will die or cease to spring.

In young woods of small extent the hoe well used is the best preventive of weeds; but in woods of several hundred acres in extent the expence of keeping the ground under the hoe would be very serious. All that in such a case is necessary, is to cut down the weeds twice a year, with a small scythe (never allowing them to seed), the first cutting towards the end of May, and the second about now. The weeds may be allowed to lie on the ground and there decay, which will add to the fertility of the ground, and, consequently, the growth of the trees. Should grass abound in amongst the trees it might be raked up and given to cattle to eat, which would help to clear the expence of cutting it. I know some proprietors of woods who are liberal enough to allow the cottagers on their estates to cut the grass from amongst the young trees, which helps to feed a cow or two, and a pig, and perhaps an ass—all useful animals; and I should be the last man in the world to curtail or advise the doing away with such a practice, providing the cottager would take care not to injure the young trees, and also to cut down the weeds as well as the grass. The forester should have strict orders to see that no injury is done to the trees, either by wounding their stems, or breaking their branches, or injuring the fences. Indeed, whether the labourer cuts the grass and weeds growing in young woods as a favour, for his own use, or is paid for the labour, he ought to be always careful not to cut the stems of the young forest trees.

Perhaps it may be thought, that if the trees are planted thickly enough they will soon grow up, and by their shade choke the weeds themselves, and thus save even the slight labour of cutting them down twice a year. This is mistaken economy. The trees may exist, at least some of them, but great numbers will be choked and die, and such as may struggle through will be so weakened and lanky, that the prospect of any of them ever making timber-trees is very remote indeed. I have seen many cases of both modes of management, and the difference was really astonishing. One plantation, left to nature, had been thickly planted seven years before I saw it; here and there a Fir or a Beech had struggled through, but for one that had risen above the weeds, I speak within bounds when I state that ten had perished. Thorns, Brambles, Thistles, Burdocks, and other weeds had obtained the mastery, and were, by the agency of the winds, scattering their seeds all over the neighbouring fields. The owner deserved to be indicted for the injury done to the adjoining lands. Another case presents itself to my memory, where the weeds were cut down annually. The trees had been planted the same time (seven years); the ground had never been hoed, but the weeds were so kept down that the trees had soon grown above them. Very few blanks were visible, and the trees averaged from nine to ten feet high, and had been thinned twice; the trees cut down made good stakes and rods for various purposes, yielding as much profit as paid for all the labour bestowed. For obvious reasons, I shall not mention the places where these two conclusive effects of neglect and care are exhibited; sufficient it is to state, that the two plantations have repeatedly come under my observation, and I pledge my veracity that I have not overstated the difference. What do these two cases prove? That the earth is a grateful mother, and will repay every atom of labour bestowed upon it. Whoever has young plantations in a neglected state, let him try a few acres as an experiment, by cutting down the weeds. I do not fear the result will induce him to extend the experiment all over his plantations.

T. APPLEBY.

VEGETABLES FOR WINTER AND EARLY SPRING.

"A CORRESPONDENT," whose case may possibly resemble many others, asks, "What vegetables are procurable in the winter and early spring months from a good-sized kitchen-garden? and when these vegetables have to be sown, or planted?" Now, this is a straightforward question, and one likely to meet the case of many a cultivator; in fact, I might say all; for we all strive to obtain the greatest amount of produce at the time above-mentioned; and the most skilful is usually the most successful in that way, except in those cases where some natural barrier presents itself in the way of attaining that result; but as our correspondent asks for information relative to the sowing and planting of such things as come into use at that period, a few notes on the most common modes whereby this is accomplished will probably meet his case; and although the usual modes of cultivating them will be found in some of the back pages of this work, a few notes on each will probably refresh the memory of the reader; at the same time, it is fully understood that only the most common things will be dwelt upon.

ARTICHOKES (JERUSALEM).—This tuber requires but little management; and if some skilful SOYER could hit upon a cheap and easy way of cooking it, so as to make it agreeable to the great mass of English people, its prolific powers would become exceedingly useful, as it will grow on almost any soil, but it thrives best on one not too dry. Tubers planted a yard apart, in March, will produce an excellent crop, fit for use from August until the following April or May. They also keep as well in the ground as any way; only in severe weather, or rather before it sets in, it would be prudent to take up a few for use, which store away in sand in some cool place.

ASPARAGUS.—This well-known favourite has been so often the subject of remark, that nothing further is necessary here, save that the amateur, who has only a limited space at his command, ought not to attempt its forcing, as it destroys the plants for the time being; but if he has plants at command, there is nothing more easy to force. A few plants taken up carefully, and placed upon a moderate warm dung-bed, and covered over with fine earth, will speedily start and grow; and all that is required is now and then a watering with liquid-manure, not that there is much danger of the beds getting dry at Christmas, but that a little enriching matter will be serviceable to the crop. Beds intended for spring use, in a natural way require only a little covering of litter in winter; but more particulars relating to the management of this crop will be forthcoming shortly.

BEANS (DWARF KIDNEY).—For winter and early spring use this is decidedly an article which requires careful management, for, being a tropical annual, its well-being, during the dark, sunless days of an English winter, is solely due to the skilful management it is subjected to; and as the amateur may not be in possession of all the means necessary to have this production at his table in mid-winter, we would advise him not to begin his culture of it until then, and about the middle of January sow his seeds rather thickly in a pan, in a warm place; but as soon as the plants appear, remove the seed-pan close to the glass, where it will be both dry and light, as a damp, moist atmosphere, however genial it may be at another season, is fatal to the French Bean in the dark days. After being there a few days, they will want planting-out into pots holding about a gallon of earth each, four plants being ample; but this also will be noticed in due time.

BROCOLI.—This useful vegetable may be had during all mild winters without any extraordinary care, save that of selecting the best kinds at sowing time; but in

very severe winters, like that of last year, this is not so easily effected; but by sowing some of the white and purple *Cape* and *Snow's Winter Brocoli* two or three times in June, and planting them out at the proper time, as well as the *Walcherin*, there is a fair prospect of having a winter supply, while a good breadth of the hardy ones ought also to be put in, as *Chappell's Cream*, *Miller's Dwarf*, *Sprouting*, and *Knight's Protecting*, with a few of the large kinds, as *Portsmouth*, or some other. Good ground is best suited to the Brocoli, while, when hard weather sets in, a tuft or two of straw thrust into the heads of some of those half-formed will save them much; but be sure and cut them when ready at such seasons, as they keep pretty well in a cool place with plenty of leaves on.

BORECOLE AND OTHER GREENS.—There is much diversity in the class, the term Borecole, especially, being very indefinite. By some, it is meant only for that description of early planted-out Cabbage which are known to be too early to form good hearts, and are, consequently, cut in March, just before they run to seed; others, class the various sprouting greens under that head of which the *Ragged Jack*, *Curled Green*, *Chou de Milan*, and many others claim attention; the *Brussels Sprouts*, the most useful of them all, being also of the same family; but the same treatment holds good for all. Seeds sown early in the spring, and the plants put out into good ground, when ready, is all that is wanted; about two feet apart each will do for the tall-growing kinds; but the Cabbage greens, which some confine the term Borecole to, need not be sown before the beginning or middle of July, and they may also be planted closer in the rows, as they have not much time to perfect their growth.

CABBAGE.—This useful vegetable is, in some shape or other, at hand all the year; for when a good variety is cut a numerous group of young sprouts rise in their place, which, in turn, are succeeded by others; so that a good breadth of Cabbage is, perhaps, the most useful crop in a garden, and it is rare that they run to seed, save in March and April. To the amateur, we, therefore, say, sow some seed of the *Fulham* and *Queen* Cabbages on the 1st and 10th of August, and plant them out at the proper time, and take care that they do not get injured by slugs or other enemies. Good ground, sheltered from the north and west, will assist them in coming early into use. The Red and Scotch Cabbage are for winter use, and, like the Savoy, ought to be sown in spring, and planted out like the Brocoli, &c. The Red Cabbage is especially a useful plant, and ought to be in every garden.

CARROTS.—This is a store vegetable, and ought to be sown in April, thinned in June, and housed in October; but young ones may be had in April by sowing the seed on a hotbed, under glass, in January; they are also sown in August, out-of-doors, for drawing in spring, but the produce is very inferior.

CELERY.—This universal favourite, being an autumn-growing plant, ought to be planted out, as directed some time since in *THE COTTAGE GARDENER*, in successive crops, and taken up accordingly; but it would be well to take up a quantity before bad weather sets in, and store it away in some cool place, either amongst sand or earth; its culture, being only lately dwelt on, need not be repeated here.

CUCUMBERS.—To have these in winter, in any quantity, requires a much greater amount of heat, space, and cultural skill than most amateurs have at their command; however, where a suitable pit exists, seeds sown about the middle of September, and planted out a month afterwards, will produce fruit in December, and more sparingly in January; but in February, and afterwards, they will be more plentiful. The *Sion House* is as good as any for that purpose. But for

those who only have a dung-bed, seeds sown in January, and planted out afterwards, as directed in former numbers, will suffice most purposes.

CRESS.—This useful salad does not always consist of those small cotyledonous leaves, the produce of the last few hours, which we will here denominate small salading; but there are hardy annual, or rather biennial plants, with crisp, curled leaves, which are more or less favourites with those who like something green. The *American* and curled kinds are the best for winter, although the *Golden Cress* has its advantage also. The middle of August is a good time to sow them.

ENDIVE.—To obtain this in good condition, sowings should be made at various times, from the middle of June to the middle of August, and the plants put out accordingly; and in dry, windy weather, cover a few plants with pan-tiles, or something else that will exclude the air, and they will blanch in a few days; and prior to severe weather setting in, take a few up with balls, and lay them in under cover somewhere, where they will keep for several days without injury.

CHICORY.—Sow this salad in April, in rows a foot or more apart, and in October, when the plant has ripened and shed its leaves, a portion may be taken up, and planted in deep pots or boxes; may be set in some dark place warmer than the external atmosphere, when it will produce leaves in abundance, which gather when required. Observe, it must be grown in darkness, otherwise its leaves will be green.

HERBS.—Although these are not properly winter nor spring articles, in a general way, yet green Mint is often wanted, and sprigs of Fennel are quite as much so. Old plants, taken up and potted, may be set in any warm place, and will quickly vegetate; other herbs are usually had in a dried state.

LEEKS.—Sow in May, in rows a foot apart, and thin them as they advance; but when they are wanted very large, plant them in rows, or trenches, like Celery, and even earth them up. They will quite equal that vegetable in size and weight of produce, and are much harder; but they cannot, in any way, become a substitute for that much-esteemed article.

LETTUCE.—Sow at various times during the summer, and plant out the seedlings when ready, and those coming into use in November ought to have some protection in severe weather. Hoops bent over the beds, and some oil-skin covering thrown over them, will preserve them very much. Later crops must have a similar covering; and those planted out to stand the winter, for spring use, ought to have a sheltered position. The *Hardy Hammersmith* is the best; next to that, the *Brown Dutch*.

MUSHROOMS.—As an article will speedily appear on this production, all that is necessary to say is, to let the amateur collect what horse-dung he can, and keep it dry; but do not, by any means, allow it to heat, so as scald, as it is termed; and by-and-by, an outside bed, well covered up, will be made capable of producing as good Mushrooms as the best contrived building.

ONIONS.—These are, like Carrots, a store produce; but if young ones are wanted in spring, sow in August, on a well-sheltered border. If they are wanted half-grown by Christmas, sow earlier than that.

POTATOES.—To have these young, plant well-ripened tubers in a moderate hotbed in November, and be sure to maintain a sufficient warmth during the dark days; but they may be had tolerably early by planting in January, and a much better crop secured. A *Shortop* round variety is the most hardy, but the *Ashleaf* is most esteemed. Do not plant too thick, but let the sets be good-sized, sound tubers.

PARSLEY.—Sow in April and July; the latter for winter and spring use; but it sometime happens that a severe winter destroys all the good leaves. To avoid this, take

a few plants up in autumn, and place them in deep pots. Set them in any light, warm place, and they will furnish a supply.

PEAS.—The forcing of Peas has rarely been attended with the success corresponding with the trouble they take; therefore, the amateur had better be satisfied with trying to obtain them as early in the season as he can, by sowing a few rows of the earliest variety, as the *Emperor*, or others, the middle of November, and again about Christmas. Be careful that mice do not attack them; and, at the proper time, apply sticks, &c.

RADISHES.—The red and white Turnip will furnish an autumn supply; but, for early spring, sow early in January, and be sure and thin in time, and let them have all the air they can, otherwise they get long, crooked necks. Keep them near the glass, and cover up from the frost.

RHUBARB.—Old roots, taken up and carried to some warm place, produce stalks in a month or so after being so placed; but it is better not to have very old roots; two-year-old plants are best. Any place, warmed to 50°, or upwards, will do.

SAVOYS.—The remarks applicable to Brocoli will do for this; only, as severe weather is said to injure the one, it is said to improve the other; so that the popular belief is, that Savoy is not good until they have a good deal of frost.

SEA-KALE.—For the earliest supply, take up a few plants, and place them in boxes, or pots, or plant in a bed, as the case may be, in heat. But, for what is wanted after the New Year, there is no better way than forcing them, where they grow, by covering them over with pots, and the ground with gentle heating material.

SMALL SALADING.—Sow Mustard, Cole seed, and Cress, in boxes or pans, and place in some heating contrivance; but when they vegetate, remove to near the glass, so that they will get green. Good seed is indispensable.

SPINACH.—Sow the long-leaved variety about the end of August, in rows a foot apart; thin a little, and, if wanted in severe weather, protect by mats, or some other contrivance. If it be indispensable, plants taken up and put into a hotbed soon produce fresh leaves, but it is rarely thought of sufficient importance to deserve so much trouble.

TURNIPS.—Sow the *Hardy Stone* and *Orange 'Jelly* early in August; and, prior to hard weather, house a few in sand. For early spring supply, sow the *American Stone* in a south border, and cover up from frost.

WATER-CRESSES.—These are rarely looked for, except in the hardy, natural condition in which they are produced; but they are sometimes had in fine growing order in mid-winter, when grown in the tepid water running from a condensing steam-engine; but as this is limited to the very few cases where such appendages are to be found, little need be said of this production.

Besides the above, there are several things in store, which are much used in winter,—as *Red Beet*, *Salsafy*, *Parsnip*, and other roots; but as these are all cultivated during the preceding summer, they need not be mentioned here; the above articles being only intended to meet the case of a Correspondent who has asked after such information.

J. ROBSON.

CONIFERÆ.

HAVING, in my last communication, given a few notes on some of the more interesting of the genus *Pinus*, I will now endeavour, by your permission, to do the same by the genus *Abies*. I must repeat, that my remarks are addressed only to those who are in their a, b, c, as it were, and who have but a limited extent of ground for the cultivation of this noble tribe of plants. I attribute your willingness to insert notes of such an imperfect and sketchy character to the belief that the class just mentioned is a large and increasing

one; and I will also express my hope that ere long we shall see another *Lambert's Monograph* on this subject, undertaken by some one of competent knowledge, and brought down to the present time. Such a work seems to be really wanted, and could not but meet with a ready sale. Abundant materials surely now exist, from various publications, both foreign and English; moreover, good growing specimens of the rarer kinds are now to be found, in private gardens and in nurseries, by which to judge of the distinctive characters of the various species.

In discussing the genus *Abies*, there is, first, a question of nomenclature which forces itself upon us; for this genus contains two very distinct sections, represented severally by the common Spruce and the Silver Fir. In nursery catalogues, the Spruce section is generally called *Abies*, the Silver Firs, *Picea*; some, however, without, as it appears to the writer, sufficient reason, choose exactly to reverse these names, calling the Spruce section *Picea*, and the Silver Firs *Abies*. Surely, it is not too much to hope that the minority will in this case give way, for peace sake and avoidance of confusion. Others, again, acknowledge neither *Abies* nor *Picea* as generic names, but class them together with the last section, under the one genus *Pinus*; but this, as they themselves acknowledge, is merely to get rid of a difficulty, namely this, that some three or four kinds are of a character intermediate between these two groups, or between one of them and some other group, as *Cedrus* or *Larix*. But if the characters of new plants really forbid our classing them with already established groups, we ought, surely, not to be afraid of making them into new ones, even though there should be but one or two species in each.

To begin, then, at once, with the genus *ABIES*, represented by the common Spruce: out of about twelve species now known, all, except four, are of comparatively recent introduction; these are the common (or Norway) Spruce, *A. excelsa*, and three closely allied species from N. America; *A. Alba*, *A. rubra*, and *A. nigra*. These three are of considerably lower growth than the Norway Spruce, and exhibit some variety in their foliage; *alba* is the most distinct, from the colour of its leaves being a silvery gray; *nigra* is distinguished by its short, thickly-set and somewhat milky-green leaves; *rubra* approximates very closely to the common Spruce, but its leaves will be found, on examination, to be more decidedly needle-like. A tree of later introduction, not much distinguished from these, is *A. orientalis*, its natural habitat is Tauria and the Mount Caucasus. The cones of the four last-named are much smaller than those of the Norway Spruce. Our next species is from the Himalayas, and is known under the different names of *Morinda*, *Khutrow*, and *Smithiana*; this approaches nearest to *alba* of those above-named, but is readily distinguished from it by its pendulous habit and its slenderer and more pointed leaves. In situations which are suited to it, its form of growth is very graceful; but it is unfortunately liable to suffer from spring frosts, by which means its growth is checked, and thus, as a young tree, it has often a stunted appearance. Our next two species are from a quarter which has furnished all our best new kinds—California; they are called *A. Douglassii* and *A. Menziesii*; the first of these is said sometimes to exceed 200 feet in height, and is remarkable for its rapid growth and rich green foliage; the latter does not exceed sixty or seventy feet, but it is of a distinct and beautiful character, being conspicuous for the silvery undersides of its leaves. We next come to two trees which are often classed with this section, but are very distinct from those which have been already named; these are the *Abies Canadensis*, or Hemlock Spruce, and *A. Brunoniana*, which is an Himalayan form of the same tree. The *A. Canadensis* has long been introduced into this country, and, when planted in a suitable soil and situation, is one of the greatest ornaments of our shrubberies. *A. Brunoniana* is, from its larger and more milky-green leaves, still more handsome; but, except in favoured spots, will not endure our winters. Many other trees have been named as belonging to the genus *Abies*; but they are either very scarce, or not as yet introduced.

The *PICEA*, (or Silver-Fir) group next claims our attention. Of the trees belonging to this section it is hard to speak in too high terms of praise; it comprises some fifteen or sixteen known species, nearly all of which are eminently deserving of the attention of the planter. Two of the

group have long ago been introduced into the country; these are the common Silver Fir, *Picea pectinata*, and the Balm of Gilead, *P. Balsamea*. Besides the first-named species, three other kinds are indigenous to Europe; these are *P. Pinsapo*, from the south of Spain; *P. Cephalonica*, from the "Isles of Greece," and *P. Nordmanniana*, from that now too-well known locality, the Crimea. Two species have been introduced from the Himalayas—*P. Pindrow* and *P. Webbiana*; and four from California—*P. nobilis*, *P. amabilis*, *P. grandis*, and *P. bracteata*. Of these eleven, the two Himalayan kinds have the finest foliage, but they are, unfortunately, spring-tender, and therefore should be planted in situations unfavourable for early spring growth. The four Californian kinds, with *Nordmanniana*, will, doubtless, take the highest place in general estimation, distinguished as they are both for hardiness of constitution and noble appearance. *Pinsapo* and *Cephalonica* are not of such lofty growth as the common Silver Fir, but their foliage is distinct and beautiful, the leaves being ranged not in two rows, as in the other kinds, but all round the stem, in a chevaux-de-frize form.

A short summary may here be acceptable of returns made to the *Gardeners' Chronicle* respecting the hardiness of this group of Firs. These relate to the trying season of last winter and spring twelve-month. *P. nobilis*, in eight returns, had not suffered in a single instance; *amabilis*, in four returns, and *grandis* in six, had been only slightly touched; *Nordmanniana*, in eight returns, had not suffered in the least; *Pinsapo*, out of nine, had been only slightly injured in two; *Cephalonica*, out of ten, was slightly injured in two, much injured in three; *Webbiana* and *Pindrow* in some instances entirely escaped; in others were more or less injured.

Here, I must take my leave, and, in conclusion, recommending to any who wishes to prosecute their inquiries further, a little book by the eminent nurserymen, Standish and Noble (of Bagshot), entitled "Practical Hints on Planting Ornamental Trees."—J. J. M.

THE HOUSEHOLD.

(We shall be much obliged by any of our readers sending us approved receipts in cookery, hints for household management, or any other domestic utilities, for insertion in this department of our columns.)

Now that the Tomato, or Love Apple, as it is sometimes called, is in season, and as it is more generally cultivated in this country now than it used to be, we think it a favourable opportunity for informing our readers how they may make use of the fruit of this excellent plant.

TOMATO SAUCE.—Take twelve or fifteen well-ripened Tomatoes, remove the stalks, and cut them in half; squeeze the water and the seeds from them, and put them into a saucepan with six sliced Onions, a little Thyme, Bay-leaf, salt, half-a-dozen allspice, half-a-dozen cloves, and three table-spoonfuls of beef gravy. Set them on the fire for three-quarters-of-an-hour, stirring frequently to prevent them sticking, and when the whole are melted to a proper consistency, rub them through a tamis into a clean stewpan, and after adding a little cayenne pepper just sufficient to flavour it, let it simmer for a few minutes, and then put it into bottles, or earthenware jars, covered with bladder.

TOMATO CATSUP.—Take Tomatoes when fully ripe, and bake them in a jar till tender; then strain the water from them, and rub the pulp through a sieve. To every pound of the pulp add a pint of Chili vinegar, an ounce of shalots, half-an-ounce of garlic cut in slices, a quarter-of-an-ounce of salt, and a quarter-of-an-ounce of finely-powdered white pepper. Boil the whole till it is quite soft, and rub it again through a sieve. To every pound add the juice of three lemons; boil it again to the consistency of cream, and, when cold, bottle it and keep it in a dry place.

TOMATO SOUP.—Take the red part of three large Carrots cut small, three heads of Celery, four large Onions, and two large Turnips, and put them into a saucepan with a table-spoonful of butter, and half-a-pound of lean, new ham. Let

them stew very gently for an hour; then add three quarts of brown gravy soup and some whole black pepper, with eight or ten ripe Tomatoes. Let it boil an-hour-and-a-half, and strain it through a sieve; serve it with fried bread cut as dice.

TOMATO PASTE.—Scald and peel as many ripe Tomatoes as will fill a large, deep, stone jar, and set them into a warm oven for an hour. Then skim off the watery liquid that has risen to the top, and squeeze the Tomatoes through a sieve. Add salt, cayenne, pounded mace, and powdered cloves to your taste, and to every quart of Tomatoes add half-a-pint of vinegar. Stew the whole slowly in a porcelain-lined saucepan for three hours, frequently stirring it from the bottom till it becomes a smooth, thick paste. Then put it into small jars, or glasses, and cover it closely with bladder. This is an excellent sauce at the season when fresh Tomatoes cannot be had, and is very good for thickening soups.

STEWED TOMATOES.—Slice the Tomatoes into a tinned stewpan, season them with pepper and salt, and place bits of butter over the top. Put on the lid close, and stew gently for twenty minutes. After this, stir them frequently, letting them stew till they are well done. A spoonful or two of vinegar will be considered an improvement by many. Excellent with roast beef or mutton.

BAKING BREAD WITH DEFICIENT YEAST.—The following way of baking bread with a very small quantity of yeast, has been given to me by the cottager who tried it; and thinking it may be useful to others, I forward it for insertion, with two other scraps for the house-keeping department.

The cottager, named above, not being able to get yeast for her baking day, and having only one spoonful left, thought it possible it might answer used in the following way:—She kneaded it up with the usual proportion of water and flour into a piece of dough about the size of a large teacake, then left it to rise; and when risen as much as usual when put into the bread tins, she put to it as much flower again, and water enough to knead it up with. After kneading it, she left it as before; and when it had risen again, added flour and water in the same proportions, and continued to do this till she had kneaded twenty pounds of flour. She began after breakfast, and had finished baking the whole by supper time. The only difference she made in kneading was, in having the water warmer than usual, "as hot as the hand could bear;" and she imagined this would be required, as the fermentation would be weaker from the small quantity of barm. The bread was as light as usual; "never nicer," was her own remark. She has tried the plan three or four times, and each time it has answered equally well.—S.

STEAMING POTATOES.—Pare the Potatoes, and let them be nearly the same size; or, if larger than the middle size, cut them in two. Put them into the steamer when the water boils in the middle of the pan and not before. If full-grown, they will be ready in twenty-three minutes; and when older, never require more than twenty-five minutes. Take them out directly at the end of the time. The water must be kept at the same boiling point till they are done. All sorts have been tried this way, and the plan has been used, with unvarying success, in the family sending the receipt, for more than thirty years. The writer may add, that no Potatoes cooked in any other way have ever looked better than those done by this method.—S.

PRESERVING RHUBARB.—Cut the Rhubarb as for tarts, and to every quart give one pound of good moist sugar. Put the sugar over the Rhubarb, and leave it twenty-four hours to draw out the juice. The sugar sinks, but is not dissolved. Boil the juice and sugar together for twenty minutes after it begins to boil just at the edge of the pan; then add the Rhubarb, and boil slowly twenty minutes longer. There is no need to stir the syrup, or preserve, if slowly boiled. The Rhubarb and sugar do not require a warm place to draw out the juice. By this method the pieces of Rhubarb remain separate from each other when the preserve is done. It keeps good a year, if kept in jars well dried, and in a dry place.—S.

CURE OF VINE MILDEW.

VINE mildew has been very injurious in many parts of the kingdom this season, and many different opinions have been passed as to what will cure the disease. I myself was asked this question by a friend who had two vineries well stocked with fruit, and both leaves and fruit were quite white with mildew. He had had the opinion of all his neighbours. Some of them advised him to dust the bunches and leaves with dry sulphur; others said, wash them with whitening and sulphur mixed together. He tried both plans, but they still got worse. When I went to see them the sulphur had been on them more than a month; the berries were just finished swelling, and he had given them up as lost. But, having taken part in the treatment of one about two years ago, I resolved to try what was to be done with the one before us; but, as I live some five miles off, I could only give my friend the directions how to proceed. The first thing was to get up a steady fire, and then, with the use of the garden engine, to well wash the Vines, in fact, swill them, maintain a good heat until the Vines were nearly dry, and then to mix up a portion of sulphur about the thickness of cream, and well paint all the brick flues, and keep the house close for a day or two.

I was glad to receive a note from him the other day, to say that the disease was quite stopped, and the fruit ripening fast; but there remains a little taste with the fruit at present, but I hope, by the time the fruit is quite ripe, that that will disappear also.

My friend tells me that some of the bunches are beginning to shank off; perhaps you can inform me the cause. Is it from not being dried quickly enough after washing?—A SUBSCRIBER, C. S. T.

[Our own experience of the efficacy of flowers of sulphur in curing the Vine mildew induces us to think that our correspondent's friend had really vanquished the disease before the fumes of sulphur, raised by putting it on the flue, were brought to hasten and complete the cure. We have cured Grapes violently affected, by having each berry rubbed all over between fingers covered with flowers of sulphur.

We consider the shanking caused by excessive heat and moisture applied to the branches and leaves, causing in them a rapidity of growth with which the colder situated roots could not keep pace.]

THE PRESENT HONEY SEASON.—CHLOROFORM FOR STUPIFYING.

I HAVE seen with surprise that Mr. Payne says, "the present season has been by no means a good one." This part of the world is not favourable for bees, but, after keeping bees for twenty years, I have never had so good a season as this. I began the year with only three stocks, from which I have taken, in glasses and boxes, 126lbs. of pure honey; of course, not killing the bees, and leaving them an abundant supply for the winter.

Only one of the stocks has swarmed, and the swarm has done so well, that I doubt not 15lbs. or 20lbs. of honey might safely be taken from it.

In looking over my bee notes of past years, I find that the most favourable season next to this was 1846, when I took 110lbs of honey from four stocks. I have used chloroform this year, exactly following the directions which were given some time back in THE COTTAGE GARDENER; it answered admirably.—A LANCASHIRE MAN.

I PERCEIVE, in the Bee-keepers' Calendar for August, that Mr. Payne has heard of no instances of good glasses of honey being obtained this season. I have taken one straw super containing 7lbs. and another containing 8lbs., in all 15lbs., from the same hive. The honey is exceedingly fine, and although some delay was caused in consequence of brood comb existing in the super, I expelled the bees without much difficulty.—SAGITARIUS.

DERIVATION OF NEMOPHILA.

As the original, though most unintentional stirrer-up of the "storm in a teapot," about Nemophylla or Nemophila—"call it what you will"—I am quite willing to acknowledge my stupidity in forgetting, as I ought not to have done, the *ἐν νέμει οικιερῷ* of the line to which your correspondent, "D. B.," in the number of July 31, refers.

I must, however, secondly, beg "D. B." and your readers to believe, that I am as entirely innocent of the strange phraseology contained in the letter signed "Quis," in the number of July 17, which "D. B." evidently considers mine, as I am of the same writer's cricket-killing propensities, or of "D. B.'s" (or the printer's?) far stranger accentuation, punctuation, and nomenclature. Poor Hesychius!

And now, Sir, peace and sunshine to the pretty plant in question; for all the storms ever brewed in an inkstand will never draw another word on the same subject from your entirely unconvinced, but very repentant correspondent.—

Θαλλέσδω δὲ τὰ φῶλλα καθ' ὕλην ἢ δ' ἐν κήπῳ
Κηπωρῷ* δ' ἀγαθὴν ἀδρόα φύλα φίλων.

H. G. M.

P.S.—Can you tell me the proper time to sow Fern seeds? Should it be done *now*, or in the spring? I wish to sow them, according to the directions of Mr. Moore, in his "Handbook," on squares of sand stone, for the convenience of microscopic observation.

[We differ from you, if you think the discussions about Nemophila either insignificant or uninteresting. It has elicited much that many of our readers were well pleased to learn, and we always like to know the truth, even if about the naming of a plant.

Sow the *Fern-spores* as soon as they are ripe. It is best to have them under a bell-glass, and in a place where the sun will never shine upon them.]

QUERIES AND ANSWERS.

GARDENING.

BEE-MANAGEMENT.

"In THE COTTAGE GARDENER for July 24th, 1855, I see that a correspondent (Frank Giant) says, that he has got two swarms this year from every one of his stocks of bees he has removed as recommended by a 'Country Curate.'

"I should feel much obliged if he would state in what consists the removal of the bees referred to above.

"If any of your readers, this season, have carried out the system of artificial swarm making, by driving the queen and bees into an empty hive, &c., as set forth by a 'Country Curate' some time before he left England, would favour the readers of THE COTTAGE GARDENER with an account of his experience in forming such swarms, and how the swarms and stocks have prospered since, would much oblige, I am sure, all the bee-keepers who read THE COTTAGE GARDENER, and myself in particular, by such interesting particulars.

"When bees are working, does the same bee carry both honey and pollen at the same time? or does the bee confine itself to the collecting of only honey or pollen, the one, and not both, each time it goes abroad for stores?—ABEILLE."

RATS DEVOURERS OF GOOSEBERRIES.

"Will you state whether you have ever heard of *rats* eating Gooseberries off the bushes in a garden? My gardener informs me that such is the case in my garden to a great extent, and never having heard of such a thing myself, I am equally unwilling to doubt my gardener as to be imposed upon. I am shown their *runs* (in a Parsnip bed), where are hundreds of Gooseberry husks. If rats eat the Gooseberries, would they not eat the skins?—G. F."

[There is no doubt that rats will eat Gooseberries, Rasp-

berries, and Strawberries, off the bushes, or plants, as cleanly as a human being; and what is more curious, dogs and horses will do the same. We know a spaniel fonder of small fruit than his master is, and that would pick and steal them without any fear of the prickles; but he never took to wall-fruit, like a neighbour's dog which we knew; nor, like a pony which we knew to raise his forelegs against the wall to gather and steal Apricots!]

THE APPLE FLY.

"Can you tell me of anything that will keep the fly from my Ribstone Pippin trees? I have a bountiful crop this year, and I had the trunk painted with coal gas-tar, but it has done no good. My beautiful fruit keeps falling constantly, and they are all maggot-eaten.—E. L. P."

[The insect which is so destructive to your Apples is the grub of *Carpocapsa pomonana*. The moth deposits its eggs in the eye or in the stalk-cavity of the fruit, and when the grubs are hatched they penetrate into the fruit, on which they live till such time as they are ready to go into the pupa state, when they eat their way out, and spin a cocoon in some fissure of the bark. They attack the fruit in May and August, and the only remedy is to collect the affected fruit while the grub is in them, and burn them. You should gather all your windfalls and the maggoty fruit you may find on the tree, both in spring and autumn, and have them destroyed; and during winter paint over the trunks and branches of the trees with quick-lime, or with a strong solution of salt. Coal Tar is likely to injure the tree.]

THE JOANNETING APPLE.

"'SUBURBAN' will thank the Editor of THE COTTAGE GARDENER to give him the derivation of the name of an Apple, mentioned under head "London Markets," August 13th, and called "Joanneting." As he has been in the habit of calling the same "Junetting," derived from June and eating, owing to its being ripe at the latter end of that month: rather, used to be so. He has an Apple-tree of the same sort in his garden, therefore, is the more desirous of obtaining the true derivation of the name."

[We cannot give you a better answer than is furnished by this extract from Mr. Hogg's "British Pomology."

"Abercrombie was the first who wrote it June-eating, as if in allusion to the period of its maturity, which is, however, not till the end of July. Dr. Johnson, in his Dictionary, writes it Gineting, and says it is a corruption of Janeton (*Fr.*) signifying Jane or Janet, having been so called from a person of that name. Ray* says, 'Pomum Ginettimum, quod unde dictum sit me latet.' Indeed, there does not seem ever to have been a correct definition given of it.

"In the middle ages, it was customary to make the festivals of the church, or saint's days, periods on which occurrences were to take place, or from which events were dated. Even in the present day, we hear the country people talking of some crop to be sown, or some other to be planted at Michaelmas, St. Martin's, or St. Andrew's-tide. It was also the practice, during the reign of Popery in this country, as is still the case in all Roman Catholic countries, for parents to dedicate their children to some particular saint, as Jean Baptiste, on the recurrence of whose festival, all who are so named keep it as a holiday. So it was also in regard to fruits, which were named after the day about which they came to maturity. Thus, we have the Margaret Apple, so called from being ripe about St. Margaret's day—the 20th of July. The Magdalene, or Maudlin, from St. Magdalene's day—the 22nd of July. And in Curtius† we find the *Joannina*, so called, "Quod circa divi Joannis Baptistæ natiuitatem esui sint." These are also noticed by J. B. Porta; he says, "Est genus alterum quod quia circa festum Divi Joannis maturiscit, vulgus *Melo de San Giovanni* dicitur." And according to Tragus,‡ "Quæ apud nos prima maturantur, Sancti Johans Opffel, Latine, Præcocia mala dicuntur."

"We see, therefore, that they were called Joannina, because they ripened about St. John's Day. We have also among

the old French pears, *Amiré Joannet*—the Admired, or Wonderful Little John, which Merlet informs us was so called, because it ripened about St. John's Day. If then we add to Joannet the termination *ing*, so general among our names of apples, we have *Joanneting*. There can be no doubt that this is the correct derivation and signification of the name of this apple, and although the orthography may for a time appear singular, it will in the course of usage become as familiar as the other forms in which it was written."

PROTECTING WALL MYRTLES IN WINTER.

"The south front of my house is covered with Myrtles; and as they have grown to the height of twenty-five feet, and usually flower most abundantly, I am naturally proud of them. Last winter, however, tried them severely, and all the leaves and young shoots were killed. They were pruned carefully in, and are again covered with leaves; but as the wood is almost entirely new, I am fearful of the effects of next winter, in case it should be a severe one, and write to ask you whether you would recommend them being sheltered or protected in any way (which, as yet, they have never been), and if so, what covering would you advise being used. The Myrtles stretch along a considerable space of wall; and as they also face a flower-garden, both economy and appearance must be considered.—A COUNTRY PARSON, *Somersetshire*."

[For protection, garden mats are, of all other covering, the least objectionable to the eye, and we know of none better for your noble Myrtles.]

WHO IS A TAXABLE GARDENER?

"A Country Subscriber will feel obliged if THE COTTAGE GARDENER can inform him what constitutes a taxable gardener? Suppose a man, without any positive engagement, yet employed all the year round in attending to the garden, and doing all the little jobbings and mendings that occur at a country house; is such a person assessable as a gardener? The man receives weekly wages, and does not reside on his employer's property."

[We do not think, as you state the case, that such a man comes within the definition of either a gardener or a male servant; either of which, if above eighteen years of age, is liable to be assessed at a guinea annually. The man employed as you describe is no more than a weekly labourer. There are, however, so many finely-drawn distinctions, that we advise you to consult your attorney.]

THE POULTRY CHRONICLE.

TOTTINGTON AGRICULTURAL MEETING.

THE Poultry Show, in connection with this Society, was held on Friday, the 17th inst., at Tottington, near Bury, in Lancashire, and eclipsed any thing which has ever before been held in this locality. The day was beautifully fine, and a great many visitors from all parts of the country put in an appearance.

There were nearly 100 pens of fowls exhibited; the *Dorkings* and *Hamburghs* mustering very strong both in quantity and quality. There were eleven pens of young *Dorkings*, "chicken of 1855," entered for exhibition, and some very good birds amongst them. Next came the *Spanish* fowls, and they were indeed "noble specimens of the breed;" although less in number than the *Dorkings*, they far exceeded them in quality. Mr. Roscoe, of Knowsley (one of the judges), remarked, that he had never seen a pen of *Spanish* fowls equal to one here, exhibited by Jno. S. Henry, Esq., of Woodlands, Manchester. This remark, from one who has seen so many, and had the care of such a stock as Capt. Hornby's, proves the birds to be very good. The *Cochins* in this neighbourhood are not without their admirers, as the dozen pens of young birds proved. The first and second prizes were both carried off by Edward Ashton, Esq., beating many pens of no mean pretensions. The *Game* fowls, though not numerous represented, were

* Hist. Plant. ii. 1447.

† Hortorum, p. 522.

‡ Hist. p. 1043.

good. The *Hamburgs* were really very beautiful, and much admired by all visitors. The judges had hard work to say which were the least excellent. The *Bantams* also found their admirers, several very pretty pens being exhibited. *Aylesbury Ducks* were but poor; whilst the *Rouen* were just the contrary, and considered by the judges a very good class. There were five pens of *Geese* exhibited, in deciding upon the merits of which the judges had no difficulty, Thomas Price, Esq., carrying off both prizes with very good birds. Of *Turkeys* there were none.

The Judges, Mr. Dodds, Watkinson Hall Farm, near Halifax, and Mr. T. Roscoe, Knowsley, near Prescott, awarded the following prizes:—

DORKINGS.—Cockerel and three Pullets, Chicken of 1855.—1. First prize, Mr. James Fletcher, Stoneclough, near Manchester. (Coloured Dorkings.) Age twenty weeks. 4. Second prize, Mr. John Williams, Fallowfield Lodge, near Manchester. Age, three pullets hatched 23rd of April, 1855, cockerel 29th of April, 1855.

COCK AND TWO HENS.—13. First prize, Mr. Samuel Harrop, Middleton.

COCKEREL AND THREE PULLETS, CHICKEN OF 1855.—18. First prize, Mr. John S. Henry, Woodlands, Crumpsall, near Manchester. Age, three months. 19. Second prize, Mr. George Potter, Fallowfield, near Manchester. Age, cockerel and one pullet eleven weeks, two pullets thirteen weeks.

COCK AND TWO HENS.—20. First prize, Mr. John S. Henry, Woodlands, near Manchester.

BEST SINGLE COCK.—23. First prize, Mr. John S. Henry, Woodlands, near Manchester.

COCHIN-CHINA, OF ANY COLOUR.—Cockerel and three Pullets, Chicken of 1855.—27. Second prize, Mr. R. Edward Ashton, Oaklands, near Bury.

COCK AND TWO HENS.—35. First prize, Mr. R. Edward Ashton, Oaklands, near Bury.

BEST SINGLE COCK.—38. First prize, Mr. Robert Brookhouse, Mosley Street, Manchester.

GAME FOWLS, OF ANY COLOUR.—Cockerel and three Pullets, Chicken of 1855.—45. First prize, Mr. George F. Ashton, Limefield, near Bury. (Duckwings.) 44. Second prize, Mr. Richard Gorton, Tottington.

COCK AND TWO HENS.—47. First prize, Mr. David Henderson, Top-o'-th'-Lee, Shuttleworth.

BEST SINGLE COCK.—51. First prize, Mr. David Henderson, Top-o'-th'-Lee, Shuttleworth. (Black-breasted Red.)

PHEASANTS OR HAMBURGS.—Cockerel and three Pullets, Chicken of 1855.—60. First prize, Mr. Edwin Coop, Booth, Tottington. 61. Second prize, Mr. Thomas Wood, Radcliffe, Lancashire.

COCK AND TWO HENS.—69. First prize, Mrs. David Henderson, Top-o'-th'-Lee, Shuttleworth. (Golden-spangled Hamburgs.)

BEST SINGLE COCK.—76. First prize, Mrs. David Henderson, Top-o'-th'-Lee, Shuttleworth. (Silver-spangled Hamburgs.)

POLANDS.—Cockerel and three Pullets, Chicken of 1855.—77. Second prize, Mr. James Fletcher, Stoneclough, near Manchester.

COCK AND TWO HENS.—78. First prize, Mr. James Fletcher, Stoneclough, near Manchester.

BEST SINGLE COCK.—79. First prize, Mr. James Fletcher, Stoneclough, near Manchester.

BANTAMS, OF ANY VARIETY.—Cock and two Hens, or Cockerel and three Pullets.—82. First prize, Mr. William Wanklyn, jun., Greenbank, Bury. (Gold-laced Bantams.) Age, two years. 83. Second prize, Mr. William Wanklyn, jun., Greenbank, Bury. (Black Bantams.) Age two years.

DUCKS (Aylesbury, or other White variety).—Drake and two Ducks.—85. First prize, Mr. George F. Ashton, Limefield, near Bury. (Aylesbury.) 86. Second prize, Mr. David Henderson, Top-o'-th'-Lee, Shuttleworth. (Aylesbury.)

ROUEN, OR OTHER DARK VARIETY.—Drake and two Ducks.—91. First prize, Mrs. David Henderson, Top-o'-th'-Lee, Shuttleworth. (Rouen.) 90. Second prize, Mrs. David Henderson, Top-o'-th'-Lee, Shuttleworth. (Rouen.)

GESE.—Gander and two Geese.—92. First prize, Mr. Thomas Price, jun., Chamber Hall, Bury. (Toulouse Geese.) 93. Second prize, Mr. Thomas Price, jun., Chamber Hall, Bury. (Toulouse Geese.)

BIRMINGHAM POULTRY SHOW.

THIS great Show of England, we have reason to believe, will this year at least equal any of its predecessors. More than four hundred and fifty pounds will be given in prizes, including *Nine Silver Cups*, of the value of *Ten Guineas* each, for the best pen of Pencilled Hamburg, Spangled Hamburg, Polish, Spanish, Dorking, Cochinchina, Game, and Gold or Silver Bantams; and for the best four Pens

of Pigeons, but exclusive of Prizes in the Extra Classes and for Cottagers' Poultry.

Mr. Ottley has also offered a *Gold Medal*, of the value of *Ten Guineas*, as an *extra prize*, for the best Pen of Polish fowl of any colour, to be selected from the several classes for this variety.

ANERLEY POULTRY SHOW.

THIS was held on the 28th, 29th, and 30th of August, in the Anerley Gardens.

In winter we delight in a large roomy building, where we can see our favorites with the satisfaction that both they and ourselves are protected from the unkind wind that, may be, howls without, or the biting frost, or the cold drizzling rain that penetrates all coverings, whether provided by Nature or man; but in the summer and autumn we rejoice to be out-of-doors. The sun diffuses cheerfulness, and the breeze is redolent of health and purity. At this season, then, we are always glad to hear a show is to be held in a large garden. It is a great increase of enjoyment and comfort. The money paid for admission enables even the most delicate person to see the whole of the exhibition without great fatigue, because the seats in such places afford the opportunity of resting when tired, and there is ample space between the rows of pens for all to walk at ease. Here, too, a generous committee may be allowed to indulge in a military band, which, while it adds to the enjoyment, is sufficiently distant from the poultry to prevent interference with it in any way.

Everything that could minister to the pleasure of visitors was consulted, and adopted by the managers and patrons of this show; and we believe we speak the general feeling when we say, that all who visited this lovely spot were delighted with it.

Whatever improvements have been made during the years of Poultry Shows were here adopted. Thus, the pens, a thousand in number, were in a single line, every one being raised the same height from the ground, nearly four feet; each was supplied, during the day, with a large sod of growing grass; the benefit of the latter being visible in the excellent, and, in many cases, improved, condition of the birds during their stay.

Most of the best yards in England sent their choicest specimens for competition, being urged by the fact of two cups of the value of fifteen and ten guineas being offered for the two best collections. These went to Mr. Davies, of Spring Grove, and Mr. Botham, of Wexham Court. But there were, also, eleven other silver cups, of the value of five guineas each, for the best pen of each breed. The list will show who were the fortunate winners of these valuable prizes. It was optional with successful exhibitors to have either money or silver medals, and the latter represented the full value of the prize gained. The first were silver gilt; the second and third, silver of different sizes; and even the high commendations received medals.

The *Spanish* fowls were unusually good. Mr. Davies took first and second prizes for adults; Mr. Plummer for chicken; the third prizes were taken by Messrs. Allison and Plummer.

The *Dorkings* were an excellent class, the Cup being awarded to a pen of rose-combed birds belonging to Mr. Davies; who also took second prize for adults, and first for chicken. The Rev. James Boys took the third prize; and Mr. Bromley, of Birmingham, took second in chicken, with unusually good birds. As our space will not permit us to go through every class in detail, we must be excused if we confine ourselves to the most remarkable among the many good birds.

The *Cochin-Chinas* were good, although many were so deep in moult as to be almost naked. The Cup was awarded to a pen belonging to the Rev. T. G. Hodgson. In this award the Grouse birds distanced their Buff and Cinnamon brethren. We have seldom seen three as good birds as Mr. Hodgson's. The White Cochinchina class was a beautiful one: Mrs. Herbert here took first and third prizes; the second went to Mr. Rodbard.

This show brought the largest number of *Brahma Pootras* together that we have yet seen.

The *Game Fowls* were very good, and so were most of the *Hambros*. The *Silver-pencilled* chicken class was deemed by the Judges very meritorious.

The *Sebright Bantams* were not so good as they should have been, seeing a Silver Cup was offered for the first prize.

The *Geese* were excellent, as will be seen by the following weights. Three, belonging to Mr. Edwards, of Bulstrode, weighed 66 lbs.; and those of Miss Fookes, 58 lbs.

In *Goslings*, a wonderful advance has taken place in the increase of weight, and we mention it, that our readers may be aware of what may be done. The two prize pens, belonging to Mr. Davies, containing four birds each, weighed 150 lbs. Mrs. Ford took first prize with her celebrated Ducks, hard run by Mr. Davies, from whom they were originally purchased. The first-prize pen weighed 20 lbs.; the second, 19½ lbs.; and the third, 19 lbs; three birds in each.

In *Ducklings*, four birds were required, and here the successful weighed 26 lbs. and 25 lbs.

Rouen Ducks were numerous, but perfect birds formed the exceptions. No one can do wrong in these who takes the Wild Duck and Mallard for his standard of colour, especially in the bills of the Duck. We mention this, because many exhibitors do not seem to know what guide to follow in these birds.

Nothing could exceed the pains taken by every one connected with the show to add to the comfort or enjoyment of the visitors; and, we believe, they were eminently successful. It was one of the most comfortable we ever visited. The Band of the Royal Artillery played daily, and from the beauty of the spot, the accommodation provided of every sort, and the lovely weather, the Anerly Poultry Show was at the same time a "Fête Champetre."

Messrs. Smallfield, Ryder, and Wells, who had the management, were ubiquitous, and deserve the best thanks of all who, for half-a-crown, or a shilling, enjoyed this pleasant meeting.

The Judges were:—G. J. Andrews, Esq., Dorchester; E. Hewitt, Esq., Birmingham; Mr. Baily, London.

SPANISH.—Cock and two Hens.—6. First Prize and Cup, H. D. Davies, Esq., Hounslow. 5. Second, H. D. Davies, Esq., Hounslow. 18. Third, Wm. Plummer, Esq., Brislington, near Bristol. Highly Commended.—12. Edw. Simons, Esq., Birmingham. Commended.—1. Geo. Botham, Esq., Wexham Court, Slough. 9. Michael Potter, Esq., Prestwich.

Cock and two Pullets.—35. 36. First and Second Prize, Wm. Plummer, Esq., Brislington.

DORKING (Coloured).—Cock and two Hens.—47. and 48. First and Second Prizes and Cup, H. D. Davies, Hounslow. 38. Third, Rev. James Boys, near Cranbrook. Highly Commended.—39. Geo. Botham, Esq., Wexham Court, Slough. 55. G. G. Wells, Esq., Stilton, Hants. Commended.—52. Rev. F. Thursby, Northampton. 63. W. G. K. Breavington, Esq., Hounslow. (A good class.)

Cock and two Pullets.—77. First, H. D. Davies, Esq., Hounslow. 91. Second, Wm. Bromley, Esq., Birmingham. 67. Third, Mr. James Lewry, Crawley, Sussex. Highly Commended.—68. Mr. James Lewry, Crawley, Sussex. Commended.—76. H. D. Davies, Esq., Hounslow. 61. S. C. Baker, Esq., Beaufort-street, Chelsea. (A good class.)

DORKING (Speckled).—Blue, or Cuckoo, or Brown and White.—97. First, George Botham, Esq., Slough. 99. Second, Mr. James Lewry, Crawley, Sussex. 98. Third, Mr. James Lewry, Crawley, Sussex.

Chicken of 1855.—102. First, Charles Elgar, Esq., Reigate. 108. Second, Charles Dorrien, Esq., Ashdean, near Chichester. 104. Third, Charles Elgar, Esq., Reigate.

DORKING (White).—Cock and two Hens.—115. First, N. Antill, Esq., Portsea. 110. Second, J. Jennens, Esq., Moseley. Highly Commended.—116. W. Symonds, jun., Esq., Dorset. 119. The Hon. Mrs. Albert Way, Wonham Manor.

Cock and Two Pullets.—129. First, N. Antill, Esq., Portsea. 121. Second, J. Clift, Esq., Dorking. Highly Commended.—128. N. Antill, Esq., Portsea. Commended.—124. G. Horne, Esq., Egham. 131. C. Dain, Esq., Southampton.

COCHIN-CHINA (Cinnamon and Buff).—Cock and two Hens.—153. First, Mrs. H. Fookes, Whitechurch. 142. Second, F. C. Steggall, Esq., Weymouth. 159. Third, Lord de Blaquiere, Havant. Highly Commended.—145. P. Jones, Esq., Fulham. 147. W. H. Snell, Esq., St. Swithin's Lane. 163. W. Sanday, Esq., Holme Pierrepont. Commended.—137. E. V. Harcourt, Esq., Uckfield. 140. J. A. Devenish, Esq., Weymouth.

Cock and two Pullets.—181. First, J. Fairlie, Esq., Cheveley Park. 191. Second, T. Burnett, Esq., Preston. 201. Third, W. Sanday, Esq., Nottingham. Highly Commended.—196. Mrs. H. Fookes, Blandford. Commended.—170. Mrs. Edmund Herbert, Powick. 204. Mr. James Cattell, Birmingham. (A good class.)

COCHIN-CHINA (Grouse and Partridge-feathered).—Cock and two Hens.—209. First Prize and Cup, Rev. G. F. Hodgson, Bridgwater.

214. Second, C. Punchard, Esq., Haverhill. 208. Third, Rev. G. F. Hodgson, Bridgwater. Commended.—210. T. Bridges, Esq., Croydon.

Cock and two Pullets.—229. First, Mrs. Ford, Ide. 216 and 217. Second and Third, Rev. G. F. Hodgson, Bridgwater.

COCHIN-CHINA (White).—Cock and two Hens.—240. First, R. Chase, Esq., Birmingham. 232. Second, A. Peters, Esq., Wolverhampton. 239. Third, W. H. Snell, Esq., London.

Cock and two Pullets.—247. First, Mrs. Herbert, Powick. 254. Second, J. R. Rodbard, Esq., Bristol. 246. Third, Mrs. Herbert, Powick. Highly Commended.—243. A. Peters, Esq., Wolverhampton. 251. H. D. Davies, Esq., Hounslow. 252. R. Chase, Esq., Birmingham. Commended.—253. R. Chase, Esq., Birmingham. (An excellent class.)

PENCILLED BRAHMA POOTRA.—Cock and two Hens.—262. First Prize and Cup, H. D. Davies, Esq., Hounslow. 268. Second, Joseph Allison, Esq., Acton. Highly Commended.—260. J. A. Devenish, Esq., Weymouth. 263. H. D. Davies, Esq., Hounslow.

Cock and two Pullets.—289. First, Lord de Blaquiere, Woodlands. 270. Second, Rev. George Calvert Beeby.

LIGHT BRAHMA POOTRA.—Cock and two Hens.—300. First, R. H. Bush, Esq., Lansdowne, Bath. 297. Second, Rev. F. Thursby, Northampton.

Cock and two Pullets.—316. First, Joseph Allison, Esq., Acton. 307. Second, J. A. Devenish, Esq., Weymouth. Highly Commended.—317. J. Allison, Esq., Acton. Commended.—308. W. Saunders, Esq., Cowes. 310. J. Fairlie, Esq., Cheveley Park.

GAME (White and Piles).—Cock and two Hens.—321. First, J. Monsey, Esq., Norwich. 327. Second, Mr. Isaac Avery, King's Norton. 326. Third, John Lane, Esq., Goodrest, Warwick.

Cock and two Pullets.—336. First, S. Matthew, Esq., Stowmarket. 342. Second, H. Shield, Esq., Sydenham. Highly Commended.—334. J. Monsey, Esq., Norwich. 340. John Lane, Esq., Warwick. 341. Henry Shield, Esq., Sydenham. (A good class.)

GAME (Blacks, Black-breasted Reds, other Reds, and Brassy-winged).—Cock and two Hens.—352. First Prize and Cup, C. R. Titterton, Esq., Birmingham. 360. Second, Henry Shield, Esq., Sydenham. 349. Third, J. Monsey, Esq., Norwich. Highly Commended.—345. E. Freer, Esq., Birmingham. 347. John Taylor, Esq., Dorking.

Cock and two Pullets.—373. First, H. Shields, Esq., Sydenham. 364. J. Monsey, Esq., Norwich. Highly Commended.—366. J. Rodbard, Esq., Bristol. 370. Rev. J. L. Fellows, Norfolk. Commended.—375. H. Shields, Esq., Sydenham. 377. I. Avery, Esq., King's Norton. (An excellent class.)

GAME (Duckwings, Greys, and Blues).—Cock and two Hens.—387. First, E. H. Strange, Esq., Bedford. 386. Second, W. Buncombe, Esq., Taunton. 382. Third, J. Monsey, Esq., Norwich.

Cock and two Pullets.—391. First, Mr. J. Monsey, Norwich. 398. Second, E. H. Strange, Esq., Bedford. Commended.—395. S. Matthew, Esq., Stowmarket. 396. S. Matthew, Esq., Stowmarket. 401. I. Avery, Esq., King's Norton. (A good Class.)

GOLD PENCILLED HAMBURGH.—Cock and two Hens.—404. First, J. Marshall, Esq., Taunton. 405. Second, W. C. Worrall, Esq., Liverpool. 407. Third, W. Taylor, Esq., Amptill. Commended.—414. Rev. J. Atkinson Briggs, Bessel's Green.

Cock and two Pullets. 417. First, W. C. Worrall, Esq., Liverpool. 419. Second, W. Taylor, Esq., Amptill. 423. Third, W. Tyler, Esq., Birmingham. Highly Commended.—424. Rev. J. A. Briggs, Bessel's Green.

GOLD SPANGLED HAMBURGH.—Cock and Two Hens.—433. First, James Dixon, Esq., Bradford. 434. Second, Joseph Conyers, Esq., Leeds. 426. Third, W. C. Worrall, Esq., Liverpool. Commended.—427. H. Thompson, Esq., Windsor.

Cock and two Pullets.—437. First, R. T. Fellows, Norfolk. Second, Withheld. 436. Third, Mrs. Henry Fookes, Blandford.

SILVER-PENCILLED HAMBURGH.—Cock and two Hens.—441. First, Edward Archer, Esq., Malvern. 445. Second, Rev. F. Pryor, Stevenage. 442. Third, Miss Bennett, Betchworth.

Cock and two Pullets.—454. First Prize and Cup, G. Botham, Esq., Slough. 449. Second, Edward Archer, Esq., Malvern. 464. Third, Hon. Mrs. Albert Way, Surrey. Highly Commended.—463. James Dixon, Esq., Bradford. Commended.—450. Edward Archer, Esq., Malvern. 455. G. Botham, Esq., Slough. 456. W. Taylor, Esq., Amptill. 457. F. Buckland, Esq., Bucks. 459. Miss M. Bennett, Betchworth. (A very meritorious class.)

SILVER-SPANGLED HAMBURGH.—Cock and two Hens.—470. First, T. Burnett, Esq., Lancashire. 467. Second, G. Botham, Esq., Slough. 468. Third, T. B. Wright, Esq., Birmingham. Commended.—476. James Dixon, Esq., Bradford.

Cock and two Pullets.—490. First Prize and Cup, W. Jefferey, Esq., Bucks. 494. Second, R. R. Clayton, Bucks. 496. Third, Dr. Homiton. Highly Commended.—489. W. Jeffery, Esq., Bucks. 498. M. Leno, Esq., Herts. 492. R. Clayton, Esq., Bucks.

POLAND (Black with White Crests).—Cock and two Hens.—507. First Prize and Cup, G. C. Adkins, Esq., Edgbaston. 511. Second, T. Battye, Esq., Holmfirth. 512. Third, T. P. Edwards, Esq., Lyndhurst.

Cock and two Pullets.—519. First, T. Battye, Esq., Holmfirth. 520 and 521. Second and Third, T. P. Edwards, Esq., Hants.

POLAND (Golden).—Cock and two Hens.—526 and 527. First and Second, R. H. Bush, Esq., Lansdowne, Bath. 533. Third, Jos. Allison, Esq., Acton.

Cock and two Pullets.—536. First, James Dixon, Esq., Bradford. Second and Third withheld.

POLAND (Silver).—Cock and two Hens.—541. First, G. C. Adkins, Esq., Birmingham. 548. Second, S. T. Smith, Esq., Madeley. 547. Third, C. Clark, Esq., Street.

Cock and two Pullets.—555. First, W. Symonds, Esq., Milborne St. Andrew. 557 and 558. Second and Third, T. P. Edwards, Esq., Lyndhurst.

SEBRIGHT BANTAMS (Gold-laced).—Cock and two Hens.—572. First Prize and Cup, H. Wildman, Esq., Birmingham. 568. Second, Mr. J. Monsey, Norwich. 570. Third, G. C. Adkins, Esq., Birmingham. 577. Fourth, M. Leno, jun., Esq., Herts.

SEBRIGHT BANTAMS (Silver-laced).—Cock and two Hens.—587, 586, and 585. First, Second, and Third, M. Leno, jun., Esq., Herts.

BANTAMS (Black).—Cock and two Hens.—596. First, S. C. Baker, Esq., Chelsea. 590. Second, Miss S. Perkins, Birmingham. Highly Commended.—592. Mr. James Monsey, Norwich. Commended.—597. J. Rodbard, Esq., Bristol.

BANTAMS (White).—Cock and two Hens.—603. First, Mr. James Monsey, Birmingham. 604. Second, G. C. Adkins, Esq., Birmingham.

BANTAMS (Any other variety).—Cock and two Hens.—614 and 615. First and Second, W. Saunders, Esq., Cowes. 617. Third, Miss Frances Calvert, Hunsdonbury.

FOR ANY VARIETY OF FOWLS NOT COMPRISED IN THE FORE-MENTIONED CLASSES.—Nine Prizes of £1 each, viz.:—625. H. D. Davies, Esq., Hounslow. (Poland). 629. Miss Watts, Hampstead. (Turkish). 631. Miss Hart, Matlock. (White Chinese Sithy). 634. J. Leighton, Esq., Cheltenham. (Malay). 636. Lord de Blaquiére, Havant. (Cuckoo Cochon China). 637. J. Rumsey, Esq., Shadwell. (Malay). 638. H. Higgs, Esq., Southampton (Foreign). 639. T. Dutton, Esq., Streatham Common. (White Poland). 649. J. Conyers, Esq., Leeds. (Black Hamburg).

GESE.—Gander and Two Geese.—660. First, Francis Edwards, Esq., Bulstrode Park, Bucks. 658. Second, Mrs. H. Fookes, Whitechurch, Blandford. 654. Third, J. Fairlie, Esq., Cheveley Park, Newmarket. Four Goslings.—668 and 669. First and Second, H. D. Davies, Esq., Spring Grove, Hounslow.

DUCKS (Aylesbury).—Drake and two Ducks.—685. First, Mrs. B. J. Ford, Exeter. 67. Second, H. D. Davies, Esq., Hounslow. 686. Third, Mrs. B. J. Ford, Exeter.

Four Ducklings.—First, Mr. J. Weston, Aylesbury. 70. Second, H. D. Davies, Esq., Hounslow. Highly Commended.—702. H. D. Davies, Esq., Hounslow. Commended.—70. J. Fairlie, Esq., Newmarket. 698. Mr. J. Weston, Aylesbury.

DUCKS (Rouen).—Drake and two Ducks.—721. First, Theed W. Pearse, Esq., Bedford. 728. Second, W. G. K. Breavington, Esq., Hounslow. 719. Third, Mrs. H. Fookes, Whitechurch, Blandford.

DUCKS (Any other variety).—Drake and two Ducks.—736. First, Miss S. Perkins, Birmingham. 734. Second, Geo. Botham, Esq., Slough. 739. Lord de Blaquiére, Woodlands, Hants.

TURKEYS.—Cock and two Hens.—750. First, C. Edwards, Esq., Brockley Court, Bristol. 747. Second, J. Fairlie, Esq., Newmarket. 749. Third, Miss Milward, Newton St. Loe, Somerset.

Turkey Poults.—751. First, J. Fairlie, Esq., Newmarket. 755. Second, J. K. Fowler, Esq., Aylesbury.

Silver Cup, for the Best Collection of Poultry, to H. D. Davies, Esq.
Silver Cup, for the Second Best Collection of Poultry, to George Botham, Esq.

PIGEONS.

JUDGE.—Dean Wolstenholme, Esq., Gray's Inn Road.

CARRIERS.—761. First, for the best Cock, G. C. Adkins, Esq., Birmingham. 765. Second, for the best Hen, E. Corker, Esq., Cheapside. Commended.—763 and 764. E. Corker, Esq., Cheapside. 772. E. Maddeford, Esq., Middlesex.

ALMOND TUMBLERS.—784. First, John Eaton, Esq., Islington. 780. Second, J. Percivall, Esq., Walworth. Commended.—782. F. Esquilant, Esq., Oxford-street.

MOTTLED TUMBLERS.—Prizes withheld.

BALDS, OR BEARDS.—789 and 790. First and Second, H. Weir, Esq., Peckham.

OWLS.—796. First, H. Weir, Esq., Peckham. 802. Second, C. W. Burningham, Esq., London.

NUNS.—805. First, Thomas Twose, Bridgewater. 804. Second, J. Percivall, Esq., Walworth.

TURBITS.—816. First, H. Weir, Esq., Peckham. 814. Second, C. R. Titterton, Esq., Birmingham.

ARCHANGELS.—819. First, G. C. Adkins, Esq., Birmingham. 822. Second, Jones Percivall, Esq., Walworth.

JACOBINS.—824 and 826 First and Second, H. Weir, Peckham.

FANTAILS.—840 and 839, First and Second, H. Weir, Peckham.

TRUMPETERS.—854 and 857. First and Second, J. Percivall, Walworth.

POUTERS.—865. First, G. C. Adkins, Birmingham. Second, withheld.

BARBS.—871. First, H. Weir, Peckham. 875. Second, S. C. Baker, Beaufort Street, Chelsea.

RUNTS.—887 and 888. First and Second, S. C. Baker, Beaufort Street, Chelsea.

DRAGONS.—895. First, Edward Matford, Staines. 896. Second, C. W. Burningham, London.

Class A. Silver Cup, value Five Guineas, for the best four Pens of Pigeons, of different varieties.

957, 958, 959, 960. J. M. Eaton, Islington Green.

Commended.—937, 938, 939, 940. H. Weir, Peckham.

NEW BOOKS.

AN HOUR WITH THE HOLLYHOCK. By W. Paul.*

THIS has deservedly arrived at a second edition. It is full of amusing as well as instructive information. The following are the twelve varieties recommended by the author as the best:—

Beauty of Cheshunt (Paul), light rosy-red.

Glory of Cheshunt (Paul), clear golden-yellow.

Honourable Mrs. Ashley (Roake), deep peach.

Lizzy (Paul), clear peach.

Lord Jocelyn (Paul), bright cherry-crimson.

Louis Napoleon (Paul), silvery-blush and chocolate.

Magnum Bonum (Baron), maroon.

Mrs. Parsons (Parsons), bright rosy-salmon.

Pourpre de Tyre (Bircham), rich smooth purple.

Purple Perfection (Bircham), rich dark purple.

Unique (Bircham), rich carmine.

Walden Rival (Chater), orange and crimson, shaded.

LONDON MARKETS.—SEPTEMBER 3RD.

COVENT GARDEN.

It would be difficult to enumerate the varieties of *Apples* and *Pears* that now find their way to the market. The most prominent of the former are *Kerry Pippins*, *Red Astrachan*, and *Duchess of Oldenburg*. *Jargonelles* are very abundant, and there is also a good supply of the old varieties, such as *Lamams*, *Orange*, *Bergumot*, and *Windsor*. *Plums* are now becoming very plentiful, such varieties as the *Orleans*, and a black one which is called in Kent the *Black Martin*, being sold by the sieve in large quantities. This *Black Martin* is also sold under the name of *Violet*, but it is not the *Violet*; nor is it the *Précoce de Tours*, which has been and gone about a fortnight ago. *Green Gages*, from France, are very general; they are not the true *Green Gage*, but the *Reine Claude Petite*, or *Little Gage*, which is a very inferior variety. *Grapes* are abundant; and so also are *Pine Apples*, particularly the West Indian, which seem very fine, being large and ripe. *Peaches*, *Nectarines*, and *Apricots* are plentiful. *K ntish Filberts* are coming in at 9d. per lb. Vegetables and Flowers abundant.

FRUIT.

Apples, kitchen,
per bushel 3s. to 4s.
" dessert, doz. 4s. " 6s.
Pears 6s. " 12s.
Apricots, per doz. 2s. " 4s.
Peaches, per doz. 8s. " 15s.
Nectarines, doz. 8s. " 15s.
Cherries, lb. — " —
Plums — " —
Pine-apples, lb. 3s. " 6s.
Grapes, lb. 3s. " 6s.
Melons, each 2s. " 6s.
Figs — " —
Gooseberries, per
quart — " —
Currants — " —
Raspberries — " —
Strawberries, per
pottle — " —
Oranges, per 100 4s. " 10s.
Lemons, doz. ... 1s. to 1s. 6d.

VEGETABLES.

Cabbages, per doz. 9d. to 1s.
" Red, per doz. 2s. " 4s.
Cauliflowers, doz. 3s. " 6s.

Broccoli — " —
Savoys — " —
Greens — " —
Spinach, per sieve 1s. " 2s.
Peas, per bush. 4s. 6d. " 5s.
Beans — " —
French Beans,
half sieve 1s. 6d. " 2s. 6d.
Scarlet Runners 4s. 6d. to 6s.
Almonds, per lb. 2s. " —
Nuts, Filberts, lb. — " —
" Cobs, lb. .. — " —
" Barcelona,
per bushel 20s. " 22s.
" Brazil, per
bushel 12s. " 14s.
Chestnuts — " —
Carrots, bunch .. 4d. " 6d.
Parsnips — " —
Beet, per doz. 1s. " 1s. 6d.
Potatoes, per cwt. 10s. " 20s.
Turnips, bunch .. 2d. " 6d.
Onions, young,
bunch 1d. " 2d.
Leeks, per bunch 2d. " 3d.
Garlic, per lb. .. 6d. " 8d.
Shallots, per lb. 4d. " 6d.

* *An Hour with the Hollyhock.* By William Paul, author of "The Rose Garden," &c., Piper, Stephenson, and Spence, Paternoster Row. One Shilling.

COVENT GARDEN — Continued.

Horseradish, per bundle... 1s. 6d. to 2s. 6d.	Rhubarb, per bdl. 2d. „ 6d.
Lettuce, Cos, per score 6d. „ 1s.	Cucumbers, each 3d. „ 8d.
„ Cabbage 6d. „ 8d.	Vegetable Marrow per doz. 6d. „ 1s.
Endive, per score 1s. „ 1s. 6d.	Tomatoes, pun. 1s. „ 2s. 6d.
Celery, per bun. 8d. „ 1s.	Mushrooms, per pottle 8d. „ 1s.
Radishes, Turnip, per doz. bunches 1s. „ 1s. 6d.	HERBS.
Water Cresses, per doz. bunches.. 6d. „ 9d.	Basil, per bunch 6d. to 9d.
Small Salad, per punnet 2d. „ 3d.	Marjoram, per bunch 6d. „ 9d.
Artichokes, each 3d.	Fennel, per bunch 2d. „ 3d.
Asparagus, per bundle.... 1s. 6d. „ 4s.	Savory, per bunch 2d. to 3d.
Sea-kale, per pun. — „ —	Thyme, per bunch 2d. „ 3d.
	Parsley, per bunch 2d. „ 3d.
	Mint, per bunch 4d. „ 6d.

GRAIN AND SEED.

WHEAT.	PEAS.
Kent and Essex, red, per qr. ... 71s. to 75s.	Boiling, per qr. 42s. to 47s.
Ditto, white.... 76s. „ 83s.	Common 36s. „ 38s.
Norfolk and Suffolk 71s. „ 74s.	Grey 37s. „ 40s.
Dantzic 86s. „ 93s.	Maple 40s. „ 42s.
Rostock 81s. „ 90s.	SEEDS.
Odessa..... 73s. „ 76s.	Turnip, White, per bush. — to —
American..... 83s. „ 85s.	Swede — „ —
BARLEY.	Rape 84s. „ 86s.
Malting 29s. to 30s.	Linseed, sowing 70s. „ 76s.
Grinding and Distilling.... 29s. „ 31s.	„ crushing 70s. „ 73s.
Chevalier 31s. „ 34s.	Clover, English, red..... 60s. „ 68s.
OATS.	„ Foreign do. 52s. „ 57s.
Scotch, feed .. 31s. to 32s.	„ White 68s. „ 73s.
English 25s. „ 26s.	Trefoil 28s. „ 32s.
Irish 24s. „ 26s.	Rye 40s. „ 43s.
Dutch Broo .. 24s. „ 28s.	Tares — „ —
Danish 25s. „ 27s.	Canary 46s. „ 50s.
Russian 26s. „ 29s.	Hemp 50s. „ 53s.
BEANS.	Linseed Cake, per ton £11 to £12 10s.
Harrow 41s. to 43s.	Rape Cape £6 10s. „ £6 15s.
Pigeon 42s. „ 48s.	Indian Corn .. 47s. „ 50s.
Tick..... 40s. „ 42s.	

HOPS.

Mid & E. Kent £10 to £12	Sussex £8
Weald of Kent £8 to £10	

HAY AND STRAW.

Clover, 1st cut per load 110s. to 147s.	Meadow Hay, new 95s. to 105s.
Clover, new .. 120s. „ 130s.	Rowan — „ —
Ditto, 2nd cut 90s. „ 140s.	Straw, flail 30s. „ 36s.
Meadow Hay .. 90s. „ 120s.	Ditto, machine 28s. „ 30s.

MEAT.

Beef, inferior, per 8 lbs. .. 3s. 4d. to 3s. 8d.	Mutton, mid. 3s. 10d. to 4s. 4d.
Do. mid. 3s. 10d. to 4s.	Do. prime 4s. 6d. to 4s. 10d.
Do. prime 4s. 2d. to 4s. 4d.	Veal 3s. 10d. to 4s. 10d.
Mutton, inferior.... 3s. 4d. to 3s. 8d.	Lamb 5s. 4d. to 5s. 10d.
	Pork, large 3s. 8d. to 4s. 0d.
	Ditto, small 4s. 0d. to 4s. 6d.

POULTRY.

The supply of poultry still exceeds the demand, and prices are low in consequence. It is too early in the season, when we go to press, to give any quotation as to Partridges. Choice young birds on the morning of the 1st of September easily realise 3s. each. It is one of the anomalies of the most anomalous of all laws, the Game Laws, that birds should be legally saleable before it is possible they can be legally killed.

Large Fowls 5s. to 5s. 6d. each	Grouse .. 3s. 6d. to 4s. each
Smaller do. 3s. to 4s. „	Rabbits 1s. 4d. to 1s. 5d. „
Chickens 2s. 3d. to 2s. 6d. „	Pigeons 9d. „
Geese 6s. to 6s. 6d. „	Leverets 3s. 4d. to 4s. 6d. „
Ducks .. 2s. 9d. to 3s. 3d. „	Wild Rabbits .. 9d. to 10d. „

PROVISIONS.

BUTTER.—Cwt.	CHEESE.—Cwt.
Dorset, fine... 104s. to 108s.	Cheshire, fine .. 74s. to 90s.
Do. middling .. 90s. „ 96s.	Gloucestershire, double 70s. „ 76s.
Fresh, per doz. lbs. 10s. „ 12s.	Ditto, single.... 60s. „ 74s.
Friesland 98s. „ 100s.	Somerset 70s. „ 76s.
Kiel 94s. „ 98s.	Wilts, loaf 68s. „ 78s.
Carlow 98s. „ 102s.	Ditto, double .. 72s. „ 78s.
Waterford 98s. „ 102s.	Ditto, thin 54s. „ 64s.
Cork 98s. „ 102s.	Ditto, pines 72s. „ —
Limerick 92s. „ 96s.	Berkeley, thin .. 62s. „ 66s.
Sligo — „ —	
BACON.—Cwt.	HAMS.—Cwt.
Wiltshire, dried 80s. to 84s.	York, new 80s. to 90s.
Waterford 74s. „ 76s.	Westmoreland.. 76s. „ 86s.
	Irish..... 74s. „ 84s.

WOOL.

Down Tegs 1s. 2d. to 1s. 3d.	Leicester, fleeces .. 1s. „ 1s. 1½d.
Ditto Tegs and Ewes .. 1s. 1d. „ 1s. 2d.	Long, heavy do. 11d. „ 1s.
Half-bred Hogs gets 1s. 3d. „ 1s. 3½d.	Combings skins 10½d. „ 1s. 1d.
Do. Wethers 1s. „ 1s. 2d.	Flannel wool 1s. 1d. „ 1s. 2½d.
Kent Fleeces 1s. 1d. „ 1s. 2d.	Blanket wool .. 6d. „ 11d.

TO CORRESPONDENTS.

*** We request that no one will write to the departmental writers of THE COTTAGE GARDENER. It gives them unjustifiable trouble and expense. All communications should be addressed "To the Editor of The Cottage Gardener, 20, Paternoster Row, London."

ERRATA.—In the article on Luton Hoo there are typographical errors, some of which render the contents unintelligible; such as, p. 370, 2nd col., 10th line from top, east for west; p. 371, 1st col., 1st word of 21st line should be ram instead of seen. Farther down, the word *Helianthemans* should be *Helianthemums*; p. 372, 1st col., 12 lines from bottom, "a conical shaped roof," should be a conical shaped stage. It will be evident that a conical or pyramidal stage would present a fine appearance to a visitor traversing the back path. I allude to this particularly, because the showing off plants in houses is a feature we have all much to learn about.—R. F.

NAME OF LILY (*H. W. D., Kent*).—It is the *Lilium lancifolium rubrum*, or Red-spotted Lance-leaved Lily. Prices vary; any of the florists who advertise in our columns will gladly answer your enquiries.

REMOVING SHRUBS AND EVERGREENS (*A Subscriber*).—A yearly tenant who has planted these has no legal right to remove them without his landlord's permission.


DUNG FLUE (*A Subscriber from the First*).—There are several ways of applying dung-linings so as to command heat in a bed. Mac Phail's plan being to have a brick flue running through the whole bed, the ends being open to receive the heat from the linings applied; while Mills's plan was to work the bed entirely, by lining applied against the sides of the slender brick-work on which the frame was placed, the plant or plants being grown over a sort of hollow chamber receiving the heat; but a homely contrivance of placing a frame over a pile of brush wood, or, rather, rough billet-wood, answers equally well, the principle being the same in all cases, assiduous application of linings. Hot water has, however, superseded these tedious operations to a great extent.

VEGETABLES FOR WINTER (*Idem*).—See an article by J. Robson in to-day's paper.

NAMES OF PLANTS (*Margaret*).—Your Ferns are *Polystichum lobatum*, *Asplenium adiantum nigrum*, and *Polypodium Dryopteris*. Your *Wilsonii*, if well established, had better be protected where it is, if protection is needed. (*S. Cooper*.) *Nicotiana accuminata*. (*S. R. Short, jun.*) 1. *Veronica elegans*. 2. *Actæa Americana*. 3. *Corydalis lutea*, we think, but cannot be certain without seeing a bloom. The other plant, sent a second time, is a *Monarda*, and, we believe, *M. didyma*.

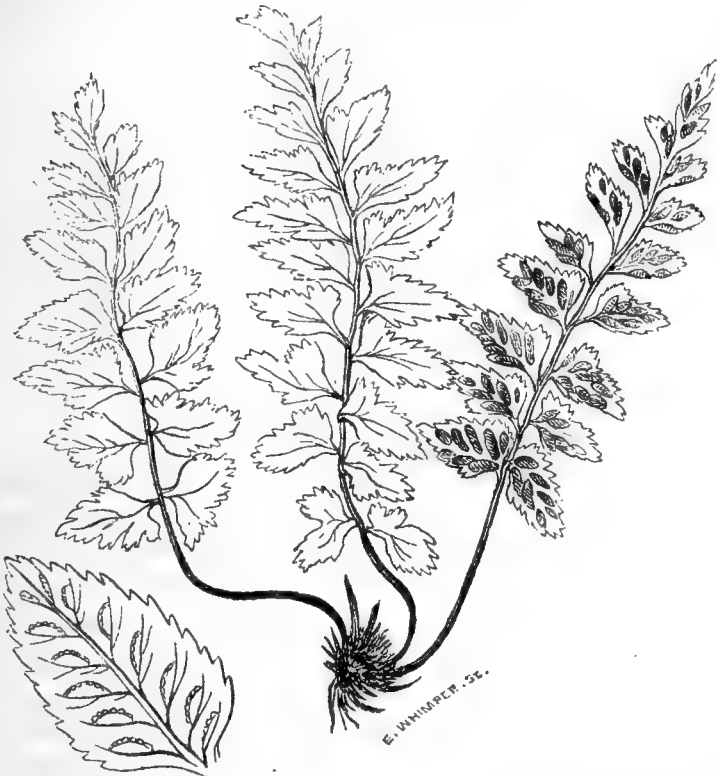
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WEEKLY CALENDAR.

D M	D W	SEPTEMBER 11—17, 1855.	WEATHER NEAR LONDON IN 1853.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in Inches.						
11	TU	Coxcomb Prominent Moth.	30.174—30.082	73—31	S.E.	—	29 a 5	24 a 6	sets.		3 19	254
12	W	Swallow Prominent Moth.	30.016—29.901	81—58	S.E.	03	21	22	6 a 56	1	3 40	255
13	TH	Buff Tip Moth.	29.912—29.779	72—58	S.E.	08	33	20	7 6	2	4 1	256
14	F	Chocolate Tip Moth.	29.814—29.682	69—50	S.W.	28	34	17	7 19	3	4 22	257
15	S	Kitten Moth.	29.915—29.903	71—58	S.	02	36	15	7 32	4	4 43	258
16	SUN	15 SUNDAY AFTER TRINITY.	29.876—29.822	71—62	S.W.	02	37	13	7 49	5	5 4	259
17	M	Lunar marbled Brown Moth.	29.899—29.769	74—49	S.W.	—	39	10	8 12	6	5 25	260

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 67.4°, and 46.3°, respectively. The greatest heat, 84°, occurred on the 12th, in 1841; and the lowest cold, 31°, on the 12th, in 1848. During the period 118 days were fine, and on 78 rain fell.

ASPLENIUM MARINUM.



IN English this is known now as the *Sea Spleenwort*, *Sea Maidenhair*, and *Dwarf Sea Fern*, but Gerarde, and others of our early herbalists, called it the *Female Dwarf Stone Fern*.

Its main *root* is black, scaly, and tufted, furnished with many intricately interwoven rootlets. From the tuft arise the *fronds*, which vary in height from three to nine inches. About one-third of the lower part of each stalk is naked, and brownish-purple, crooked at the bottom, and from where the leaflets commence, up to the summit of the stalk, there is a narrow, thick wing, or border, on each side, joining the base of the leaflets to each other. The *leaflets* are dark green above, but paler underneath, leathery, more or less alternate, very short-stalked, very irregular in form, but where most regular somewhat of an egg-shape, and almost always less than an inch in length, and mostly about half that length; often lobed on the upper edge at the broadest end, and the margin more or less toothed or cut throughout. They are nearly all of equal length, so that the outline of the frond is strap-like but pointed. The *mid-vein* of each leaflet is prominent, and the side-veins are variously forked. Attached to the upper edge of these side veins is the *fructification*, which, following their direction, slants sideways but upwards.

The fructification is on almost every side vein, and spreads, but is never confluent, or even crowded. The *membrane*, or cover of the fructification is uninterrupted, even, of a pale brown, and opens towards the mid-rib of each leaflet. The surface of each *capsule* of the fructification is curiously netted, and of a chesnut-colour.

This has been known as one of our native Ferns as long since as the time of Gerarde, 1597; at least so we conclude, from his saying that it “groweth under shadowy rocks, and craggy mountains in most places.” This, however, is giving it too wide a range, and his editor, Johnson, in 1633, confines himself to saying, “It grows in the chinks of the rocks by the sea-side in Cornwall.” Ray found it “on the rocks about Prestholm Island, near Beaumaris, and at Llandwyn, in the *Isle of Anglesea*; about the Castle of Hastings, in *Sussex*, and elsewhere on the rocks of the southern coast.” It has also been found on Marsden Rocks, *Durham*; *Isle of Man*; Black Rocks on the *Cheshire* side of the Mersey; near the Dingle, *Liverpool*; Hulme Stone Quarry, near *Warrington*; west coast of *Cornwall*; Ormeshead, near *Bangor*; Nigg, in *Ross-shire*; near Port Patrick, *Wigtonshire*; *Moray*; *Isle of Staffa*; *Fifeshire*, *Aberdeenshire*, and *Berwickshire*. In Ireland it has been found on the Sutton side of Houth Mountain, Underwood, Killiney Hill, and other places near; Derrinane, in *Kerry*; and frequently on the western and southern coasts. It has been gathered on the rocks under the Powder House, Shirehampton, near Bristol, where the water is brackish, but Mr. Swete observes that “this can hardly be considered a natural station of this Fern, it being seldom found higher up the Bristol Channel than Clevedon.”

Ray, who, like many clergymen of his time, combined the study of Medicine with that of Divinity, is rather strong in the narration of the medicinal qualities of this Fern. He says—“It is given in obstructions of the viscera, but especially of the spleen. Its gummy extract applied outwardly to burns has afforded relief when all other applications have failed.” (*Synopsis Methodica Stirpium Britannicarum*. 119.)

We know of no one who has succeeded in cultivating this Fern in the open air. Its roots cling so firmly to the sides of the chinks of the rocks where it grows naturally, that they are scarcely capable of being separated from the rocks undestroyed, and seemingly afford a warning that the soil and situation they prefer must be sedulously provided for them.

It should be planted in a well-drained pot, in a mixture of equal parts sand, small fragments of brick, and peat, and kept in the most shady part of a greenhouse, where the temperature never falls below 35°. The water employed should have half-an-ounce of common salt dissolved in a gallon; and this Fern should not be watered over the leaves, though it delights in a moist atmosphere, and, therefore, flourishes under a glass shade. When grown "in a hothouse it will attain a large size, and when the air is kept moist, does not require a glass. In such circumstances, I have seen the fronds eighteen or twenty inches long; certainly it luxuriates in warmth."* (*Sowerby's Ferns*, by Mr. Charles Johnson.)

Two slight varieties of this Fern have been noticed. One has the leaflets much narrower, and more pointed, so as to have a spear-head form, and has been named *Asplenium marinum* var. *acutum*. The other variety was mistaken by Mr. Hudson for the *Adiantum trapeziforme*, of Linnæus, and was called by him *Asplenium trapeziforme*, but it is only *A. marinum* with leaflets more deeply toothed and jagged, than ordinary. It was sent from Scotland by Dr. Alston to Mr. P. Collinson, and was subsequently found in that country in coves of the sea-shore near Wemys, by Mr. Lightfoot.

CHRYSANTHEMUMS.

If the weather is moist, the first thing I would advise to be done *now* is to stop the roots of all Chrysanthemums which are growing in the open ground and are intended for pots. The long, dry weather before and after the St. Swithin rains, caused so much hand-watering that the principal roots are just next the surface this season, as I can tell from my own plants; and such dwarf, nice plants as I never had before. The more dwarf ones, from the end of May cuttings, are planted in rows, and I have just dug down between the rows as deep as the spade would go, cutting off every fibre which extended beyond four inches from the stem, or stems; but I did not cut across, yet, between plant and plant in the row—that will be the next move; and, from the 20th to the 25th instant, will be about the time, unless the weather is very dry indeed.

I have another reason for mentioning this just now, which is, to remind the readers of THE COTTAGE GARDENER of a plan which was suggested last autumn, and if forgotten at the time cuttings were made this spring, the oversight, if thought worth a trial, as I do, might be remedied now. It was to take out the bottom eyes to prevent suckers ever rising from such kinds from which you might wish seeds, or to make dwarf, bushy plants after the model of the prize Pelargoniums. By this plan, the heads must be kept from frost, and to be cut back exactly as Pelargoniums and Geraniums are cut back, both in branch and root—indeed, much shorter, in the roots of Chrysanthemums. Whether this plan will succeed, or not, it is certainly worth a trial; and any one who has plants from cuttings of Chrysanthemums, in the open ground, may yet give it a fair trial, by opening down to the roots, and then picking out the eyes on the lower portion of the stem—say to the length of four or five inches from the roots.

* An evidence of its liking warmth is afforded by its being found a native not only of the south of France and Spain, and in northern Africa, the Canaries, and Madeira, but in no other part of Europe.

While on the subject, allow me one more suggestion; which is, that we should collect notes all over the country, as to which kind grows the longest or tallest; which the dwarfest; and which attain the intermediate growths in the open air. Those making such notes should state, also, when the cuttings were made; when they were planted out; and how often they were stopped; and the date of the last stopping for the season. I have done all this for the first time this season; but we want more "returns" before we can be sure of which are the tallest or dwarfest; or which is the very best time and way to make the cuttings; and the latest day on which the plants can be stopped without hindering them flowering at the proper, or usual, time. I am quite sure, that a set of precise rules for the management of these plants in the open air would be valuable to a great number of people; and that to grow them in the open ground is by far the best and easiest plan; also, that dwarfer plants can be had that way than by keeping them in pots. I have most beautiful little bushes of Pompones, now, not a foot high, and with eight, nine, and twelve branches; and if I put three of such into a No. 16-pot, early in October, I could make as good-looking plants of them as ever were seen. But will they flower as well as taller plants, or plants nursed up in pots from the cuttings? That we shall soon see. The dwarf, yellow Pompones, called *Hendersonii*, had flower-buds, well formed, with me by the 25th of August, and will be ready to fill front borders and beds near the windows by the 10th of October; so, that with frost or no frost, we can have a late change with this one Chrysanthemum; or, which is nearly as good, we can pot some good Geraniums, as old *Tom Thumbs*, for specimen plants, before the frost can touch them; and fill their places with *Hendersonii*, to save us from gaps for the rest of the autumn.

SAVING SEEDS OF CHINA ASTERS.

If the autumn should turn out wet, which is not unlikely, after so much heat and dry weather in August, *China Aster* seeds will not be good this year from the open ground; but with care, and a good season, we can ripen as good seeds of them here in England as those which come over from the German growers. The necessary care is to have the best sorts in very rich ground; the plants not to be crowded; and all those with single and half-double flowers to be rooted out as soon as they show their ugly faces; but still, they need not be destroyed, as every one of the family can be removed at any time, and be transplanted into the rougher grounds—as in the front of shrubs. Or, when you have them in a bed which takes all your stock, and none to spare, how are you to manage the inferior ones without making gaps in your very best bed? It is done by merely picking off the bad flowers as often as they are on the point of opening, and letting the plants fill their part of the bed just as if they were ever so good; and no one knows the difference, because the bad flowers are never allowed to open. I have also seen—and I have done it myself, about the middle of September—a dozen of the very best plants, and including all the colours among them, potted from the beds, as if they were so many Balsams; the richest soil, and some rich watering, as for Balsams. They were kept in the shade for a few days, and, after being well-established in the pots, they stood in a dry, cold pit, or frame, with the glass off, except to keep the rain and the night dew from them; but the lights were tilted for air, at top and bottom, every night. This is about the very best way for saving seeds of them in England; the change to the pot gives them such a check as really seems necessary to take the rankness of growth from them, or lowering their pride, as we say; and the rich things afterwards go to feed a superior yield of best

seeds. The next best move for this purpose, is to select your favourite colours a little earlier, and have them transplanted into the kitchen-garden, away from all such flowers, and to put them in close to a south or west wall, the same as Lettuce-plants, and to fasten them back to the wall, so as to keep them from being blown about with the wind; then to have some handy covering for throwing off heavy rains.

It may be a mere notion, but I always thought that transplanted Asters, just as they began to open their flowers, gave better seeds than those that stood even in better positions without that check. Saving seeds, is a sure sign of one being in earnest about flowers; but saving seeds is seldom saving money; it is only a saving of one's temper; for you are as sure to launch out just as much money on seeds, or plants, as if you never saved a single seed in your life-time; but it secures you good and superior varieties of many things; and such plants as suit your particular soil come better from your own seeds than from strange seeds; and when you find them falling off, you must give up saving that kind for two or three years, and then make choice of the best plants from the new stock of seed to save seeds from. If we were as industrious about flower-seeds as they are in Germany, and some parts of France, we might do wonders; for our autumn climate is so much more variable than with them, without taking our fickle summers into the account, that the difference in the degrees of ripeness would, or ought to, give us different varieties from those that are constantly appearing among the foreign crops; but we are not clever enough at that branch of gardening; and the consequence is, that our seed trade is getting more and more into the hands of sharpers. At any rate, let us not be at the mercy of those sharpers for all our seeds; let us save all we can; and what we must buy, let it not be from low dealers, whose seeds are often too dear at a gift.

The last half of last August was the best time for saving early seeds which I remember; but that was too early for China Asters, of which there are now four or five distinct breeds, and all of them seem as much improved as improvement can be pushed; but, as they have a constant tendency to degenerate with any slackness or inferior cultivation, we ought to watch them accordingly, and be as constant in our endeavours to keep them up to the best standard, for they are now so fashionable, and are always so useful in the flower-garden, that no one can do without some of them; and if only a dozen plants, why not of the very best? But the greatest use of the China Aster is, that out of it, the highest problem of combining harmonious, or of contrasting, colours, could be made in a bed from the different varieties, a thing which cannot, at present, be said of any one genus of plants; and this is the proper time to make selection of the tints for planting a bed next year; and also to mark the heights of the different kinds; for, without a proper distribution of the different heights of the plants in a bed, the best arrangement of colours may be ruined. I was in a large garden, last week, which I must not name, because it showed the best confusion of kinds and colours of all the flower-gardens I have seen. The China Asters in this garden were most magnificent; but they were disposed of in the beds just as if Jupiter had scattered the seeds from the clouds in a great rage. The average height of most of the plants was twenty inches, but some of them were so dwarf that the heads of bloom were scarcely raised from the soil; and yet these Pompones occupied the same amount of space as the tallest; and they stood all over the beds as if they came by chance. All that seemed to pass through the brains of the planter at that time was, that all the Aster beds should be full of plants. The colours, he, probably, could not know, as they were written in

German; the habit of the kinds the same; for they were all Greek, or German, or Gaelic to him. A mixture of the three, very likely; which I introduce here, as another instance of the loss of working our Aster beds, so to speak, with imported seeds, when we could save our own seeds of them just as well. At all events, make up your mind never to plant a whole bed from any of the fancy seeds we import, till you see the colours yourself the first year; as, if you do, depend on it, critics, or no critics, will not look on your beds so indulgently as I have looked on those of the said garden; but then, I know the difference; the very impossibility of planting as it should be done, which the great bulk of people never think of, but will set you and I down as clumsy planters, and as having no taste for colours, or any kind of show, except the lowest in the scale. That is—between you and I—a very vulgar taste.

Now, to save us from all this, for the future, just begin this very day, and mark out six or seven good tints in our Aster blooms, and put a number-stick to each kind, and note the colour and the height in the garden book. But to begin fairly, let us say we have only two kinds of Asters, and both are of the same height—a very good double-white, and a very large, dark double-blue one. Now, with only these two, one might plant a bed to look just like a pig with one ear; or, to look very pretty indeed, if some of the white Asters were in patches together, and the blue ones the same, and also some of each mixed, all in the same bed, it would be neither one thing nor the other, but a perfect mess; yet, a Red Indian might think it the best bed in the garden. But if you put a patch of the dark blue in the centre, then a row of the white all round it; after that, alternate rows of blue and white, till the bed was full—any one could see that you had a system, and that you planted for an aim. Whether they approved your taste was of very little consequence, because, in one bed, which does not form part of a system, one man's taste is just as good as another. I must own, however, that in planting a bed in rows of white and black—dark blue having only the value of a black colour, when placed between two rings of white—we only show the lowest degree of taste—the beginning from confusion to the regularity of a system. The next step is to take the dark blue, white, and a flesh-coloured red, or a rose-colour; or, indeed, any of the tints of red in China Asters. You will find, by placing out flowers together in damp sand, as for a nosegay, that double the quantity of red, or two rows of it, may be put to balance the white row on one side, and the dark row on the other side. Make yourself sure of this by placing cut flowers for experiment, and if you agree with me, change one row of the red flowers, and put in lighter or darker red flowers instead. If the row is of a darker red than the first, place it next the white flowers; but if it is more pinky, or lighter red, place it next the dark blue flowers, or try the rows both ways, and see which way you would like best, and make up your mind to plant the way you think best. Now, take a quantity of light mottled gray, or between that and very light blue, which is very common in Asters; you will find that these must be kept well apart from the white flowers, and that less white will be needed in a bed. After that, try all the tints you can find, and try, also, how one, or two, or three rows of one kind will look, before you determine your choice. All this may be done with cut blooms and a plateful of damp sand in the day time.

D. BEATON.

CURRANTS.—A letter from Athens states that the currants appear to have escaped this year the disease which has preyed on them for the past three years.

HINTS IN CELERY CULTURE.

I STEP out of my ordinary path to oblige a number of friends, and to meet alike a mass of inquiries and complaints that the Celery is bolting again, as usual. I do not think I can add anything to what was given in a previous article; but some, who thought they detected the initials, complain, that it was not practical enough for them,—and that there must be some other little matters of importance to know, that render a bolted head of Celery such an uncommon thing with me, and such a common thing with them. I do not believe there is a particle of difference between my practice and that which generally prevails, except in the simple matter of earthing-up early Celery, to which attention was previously directed.

There are some neighbourhoods famous for certain things. Manchester has long been celebrated for its Celery. Some years ago, I was walking round with a party of visitors, some of them from Manchester, and the Celery there became such a matter of eulogium, that I made bold to ask for a packet of seed being sent me,—as much was said to depend upon the kind. My own Celery was very good just then, the beginning of September; and, on some heads being turned out and examined, the Manchester men at once acknowledged it was of no use sending me seed,—and what puzzled them chiefly was, that in all the rows they could not find a run head. At that time there was a Horticultural Society in Luton, and first-rate Celery,—combining crispness, size, and good blanching,—used to be exhibited in September. What was wanted of this Celery was forthcoming at the dinner of the members and friends in the evening; and there it would have been of no use to propound the generally received opinion, that there was something antagonistic between large, well-grown Celery, and its due crispness and sweetness. Of course, it is possible to give such a gross feeder as Celery immense size, with rank manures, and the flavour would thus be deteriorated; but of two heads, grown with the assistance of very rotten dung or decomposed leaf-mould, the one small and the other large,—commend me to the large one for the most desirable qualities. The best Celery at Luton generally came from gardens close to, and intersected by, ditches and water-courses having a connection with the river Lea. So that, with all the aids of cultivating, the Celery plants were placed, as nearly as possible, in the very situation in which the wild Celery delights,—the sides of ditches, where the roots can have almost an unlimited supply of moisture, without being obliged to stand in stagnant water.

There are one lesser and one greater objections against having very large Celery, altogether independent of the crispness and flavour question; and these united are so conclusive, that it would be folly to grow much of the crop of a very large size. The first of these consists in the extra attention and care required to obtain large heads at an early period, say on the 1st of September, though many have large heads in August; and the second consists in the still greater care required to preserve these large heads from rotting and spoiling after they have arrived at maturity; merely because the heavy dews and rains, some of which, with every care in banking up, will find their way to the heart of the plant, and there stagnate and produce decay; while in lesser heads, the moisture will find its way out at the base of the leaves. I gave up growing large plants chiefly on account of the loss and disappointment thus occasioned; and because I could not prevent that loss, after the plants were earthed-up, by any less troublesome mode than having an elevated roof of some kind, which would throw off the rain and yet permit the action of sun and air.

Keeping in view that our native Smallage, the pro-

genitor of all our Celeries, delights in the side of a ditch, or marsh, where the water moves, however slowly, and, also, that it is a biennial, that is, grows one season and flowers the next, we are at once presented with the keynote to its successful culture. Most of even amateurs are aware that it is quite possible to make the most of biennials bloom the first season, and bloom well too, by sowing early, growing luxuriantly, and, in many cases, checking growth afterwards, by transplanting, diminution of water, &c., so as to induce the flowering habit. They do this on the principle, that luxuriance of growth and early and abundant blooming are antagonistic to each other. They act with their flowering and fruiting plants as if they were perfectly aware, that when they arrest mere luxuriance and the production of wood-buds, the plant, true to its natural instincts, would put forth its efforts in another way,—the production of flowers and seeds to continue its kind. Some of these have directed my attention to an old, gnarled Apple-tree, covered with fruit, while a young, luxuriant, fine-looking plant was destitute of the same, and asked me what I thought of root-pruning. I have had many essays upon how they bloomed a rare plant by a system of checks; and yet, from these very persons I have had complaint upon complaint that their Celery is bolting again. Why? Because, with the full knowledge that Celery is a biennial, that like other biennials, it may be made to bloom the first season, and knowing full well that that blooming is to be avoided by every possible means, they yet adopt the very means most calculated to produce that undesirable result, either by checks at an early period, or by a mode of earthing-up, which, while it exposes the whole of the foliage to the sun and air to throw off moisture by evaporation, leaves the roots, ultimately, thoroughly dry, unable to find moisture to supply the evaporation, and thus forcing the plant, in self defence, to throw up its flower-stalk,—in common terms, to *bolt*.

VARIETIES.—I have grown almost all kinds, *Manchester*, *Seymour's*, *Colé's*, *Nutt's*, *Siberian*, &c., and found every sort good, and no great difference between them, provided they were solid, not hollow, in the leaf-stalks, and well grown without checks.

TIME OF SOWING.—I have sown at all times, from Christmas to April, and with similar results; only the earlier the plants are sown, the more trouble they require to keep them in continuous healthy growth, and the earlier they come in. To get plants for the table in September, the end of February and the first week in March is early enough to sow in a hotbed. These plants should again be pricked under glass, and never allowed to stand still, until they are turned out into the trenches at the end of May. More success will attend those sown in the middle of March than in the middle of February, unless great attention is given, to keep the young plants growing regularly on, and then there is no fear of flower-stalks. At the end of March, or beginning of April, I sow again,—either in a slight hotbed, on such a place as I can protect with sashes or mats until the plants are up. These last are generally pricked-out upon a border, shaded and protected at first. The great thing is never to let the plant have a check, from want of water, &c., from the time they are up, until earthed-up for the winter. My plants had to stand rough treatment this summer, as I had no water to give them for a month; those in the pricked-out beds, and in the trenches, have to take their chance,—but evaporation from the soil was modified by surface stirrings, and a slight covering of short grass; and though, no doubt, dry, I have not yet seen a bolted head.

TIME OF PLANTING.—The first are generally turned out from the middle to the end of May, lifting them carefully with all their roots; the material in which they were pricked-out being chiefly fresh loam and decom-

posed leaf-mould, or rotten dung, in nearly equal proportions.

MODE OF PLANTING.—I grow a few early plants generally in single rows; but I grow the most in beds of from two to four rows each—the plants standing upon an average a foot each way from each other. In very early beds the plants have more room. In forming the trenches, or beds, I do not think it necessary to go down into the subsoil; from six to twelve inches is generally sufficient. I am quite as partial to width as depth. For a single fine early run, I prefer twenty-four inches in width to either eighteen or fifteen. I take what manure I can get, but I prefer the rottenest, and prefer decayed leaves, three-parts reduced, most of all. One layer is put in the trench and worked up with the bottom spit; another layer is put on, and part of what was thrown out incorporated with it. This is generally done sometimes before planting, and if there is time and opportunity, the whole is forked over several times before the plants are inserted. As the plants are taken up, every root and leaf are carefully preserved; but the bottom of the larger outside leaves are examined, and every bud and sucker carefully extracted with the point of a knife. When planted, the prepared trench is not many inches below the surrounding soil; and in stiff, cold soils, I should recommend it be scarcely lower than the surrounding ground, as thus there is less danger of the plants suffering from wet in winter. Of course, when planted they are well-watered, and screened a little from a bright sun. This leads me to notice an accessory to early cultivation of Celery, namely—

SHADING.—The sides of ditches are more or less shady during a part of the day. In the heat of summer the Celery likes the shade. In open quarters, do what you will, you cannot get large plants early without it. When wanted very early, I have placed old, narrow lights along the beds and rows, whitened to keep out the fierce rays of the sun. For secondary crops, I have placed branches of trees across the beds for shading. For the general crops, I have long grown Peas and Celery together, throwing out and preparing the trenches at an early period, and sowing early Peas in the middle of the ridge. In such cases, it is common to have the trench from three-and-a-half feet for two rows, and wider for more, and the ridge four-and-a-half to five feet, and wider if the trench was wider. I need not mention here how the bed is frequently occupied by various things until the Celery is ready, and how the sides of the ridge are also used for temporary crops, such as Radishes, Spinach, &c., before wanted to earth up the Celery. What I wish to notice, is the desirability of lines of Peas of moderate height for so far shading the Celery during the summer months, and which Peas will all be removed before the final earthing-up. I prefer the trenches and rows of Peas to run somewhat north and south. I am convinced this mode secures quicker growth in the Celery, and saves many a pail of water that otherwise would be needed. I believe that otherwise my plants would have been next to burned up this season.

(To be continued.)

WHERE TO KEEP THE GREAT AMERICAN WHEAT CROP.—The Illinois Central Railroad Company have commenced building a granary at Chicago, which is 200 feet long, 100 wide, and more than 100 feet high. This building covers nearly half-an-acre, and will require about two millions of Milwaukee brick in its construction. Its capacity will be over two millions of cubic feet; so that, if filled full, it would hold more than one million six hundred thousand bushels of grain. It is, however, to be arranged with bins, &c., so as to hold about seven

hundred thousand bushels. This is to be the storehouse at one end of a single railroad.—*American Country Gentleman.*

THE ORANGE TRIBE.

(Continued from page 374.)

THE popular divisions of the Orange tribe are, 1st. The common Orange, *Citrus aurantiacum*. 2nd. The common Lemon, *Citrus limonium*. 3rd. The Lime, *Citrus limetta*. 4th. The Citron, *Citrus medica*. And 5th. The Shaddock, *Citrus decumana*.

1ST. CITRUS AURANTIACUM (Common Orange). Native of India and China.

Of these five principal divisions, or families, there are several varieties, those of the Orange being the most numerous. On the continent, where the climate is mild enough for them to live in the open air, they cultivate as many as a hundred varieties, distinguished by the shape and colour of the fruit, and by the shape and size of their leaves. In England we distinguish about a dozen distinct varieties, namely—the common Orange, the Malta or St. Michael's, the Seville, the Sweet China, Tangerino, the Mandarin, the large Myrtle-leaved, and the Small ditto. Gold-striped, Silver-striped, the Curled-leaved, and the Willow-leaved. Of these, the St. Michael's and the Mandarin are the best for use. I have no doubt, if a sharp English or Scotch gardener were to reside for a few years in Italy, or other parts of Europe, where the Oranges are cultivated largely, he would be able to collect some varieties, very superior as to bearing, size, and flavour, to any we have yet known. The Orange will not bear the severity of our winters in the open air, and as raising seedlings with a view of improving the sorts requires a large space, we have never attempted to raise seedlings for any other purpose than as stocks to graft upon. It is only in warm climates, then, that this improvement can be effected; and this fact accounts for the great number of varieties we find in continental catalogues and works written expressly on this fruit. There is one publication entitled *Histoire Naturelle des Orangers*, published at Paris, in 1818, by Messrs. Risso, of Nice, and Poiteau, of Paris, in which are described nearly two hundred sorts, and there are upwards of a hundred figures. This may appear almost incredible to many of our Orange-eating readers, who very possibly imagine there are only two—the Orange and the Lemon.

Use.—The Orange, as is well known, is chiefly used as a dessert fruit. It is, however, employed on the continent in confectionary to a large extent, both ripe and green. It forms various liquors and conserves, either alone or combined with sugars, spirits, or wines. In cooking, it is used to give a flavour to a number of dishes. The Seville, or bitter Orange, is used largely in manufacturing Orange marmalade, and is used as a medicine in fevers and inflammations. In perfumery, our neighbours use the Orange to form various pomades. They distil the flowers for orange-water, which is not only deliciously scented, and, therefore, used as a perfume, but is also used in medicine to render it more palatable to weak stomachs, and also it is used largely in cooking. The wood of the Orange tribe is white and heavy, and is used to manufacture toys, &c. If the wild Orange was cultivated for its timber, I have no doubt it would make beautiful wood for the turner and cabinet-maker. Such are the various uses to which this delicious fruit is put to. It has been emphatically called, on account of its cheapness, the poor man's fruit, and is grown so largely, and sent to this country in such immense quantities, that the duty on it alone amounted, some years ago, to sixty thousand pounds.

2ND. CITRUS LIMONIUM (The Common Lemon). A native of the milder parts of Asia.

Of this very useful fruit there are not so many named varieties. A German author, Dr. Seckler, says there are twenty-eight in Italy; the French acknowledge eleven; and the English nurserymen twelve distinct varieties. The reason why there are not so many is because the continental growers are content, generally, to fruit seedlings, instead of budding or grafting named sorts. The Lemon is tenderer than the Orange, hence, even in the north of Italy, the cultivator finds it necessary to shelter his Lemon-trees during the cold season.

This tree is of a more irregular growth than the Orange, and has the stem of the leaf (petiole) winged. The leaves are broader and longer, and of a pale green.

The sorts cultivated in England are the Common, the Broad-leaved, the Chinese, the Imperial, the Pear-shaped, the Rough-fruited, the Smooth-leaved, Gold and Silver-striped, the Tri-coloured Striped, the Upright, and the Warted-fruited.

Use.—Lemons are used in cookery to give a flavour to meats, pies, and puddings. The well-known liquor, lemonade, is so called because of the juice of this fruit entering largely into its manufacture together with sugar and water. Its use in making punch and negus I need scarcely mention. It is also much used in medicine as a cooling thirst-allaying febrifuge.

3RD. CITRUS LIMETTA (The Lime). A native of India. We possess still fewer varieties of the Lime than of the Lemon. Dr. Seckler enumerates in Italy four, the French have two, and the English five, varieties. The latter are the common—the Weeping-branched, the Broad-leaved, the West India, and the Chinese-spreading. The Lime is very seldom seen in our greenhouses, because the fruit is not so handsome as that of the Orange or Lemon, is much smaller, and more acid.

Use.—It is used for all the same purposes as the Lemon and Citron, and besides them, the juice is sent now on board of all ships about to go a long voyage, or to be stationed at sea for many months or years, as the case may be. On board it is used both as a preventive and cure of that dreadful malady, formerly so fatal to the crews of our ships—the scurvy. Its extreme acidity and peculiar qualities rendering its juice (lime-juice it is called) antagonistic to that distressing malady. Its dwarf habit, small leaves, and pretty, roughened fruit, render it an ornament to any greenhouse or conservatory, though the fruit is not so useful as either the Orange or the Lemon.

4TH. CITRUS MEDICA (The Citron). Native of Media in Asia. The varieties of the Citron are more numerous than of the Lemon or the Lime. The tree grows in its native plains eight feet high, forming an upright tree, with the lower branches drooping. The fruit is larger than the Lemon, and has two rinds, or skins; the outer thin, and covered with glands, which secrete a sweet smelling-oil; the inner rind is thick and spongy. The flowers are large, and very fragrant.

Varieties.—The French say they have more than a dozen. Dr. Seckler reckons for Italy twelve. In England we have only six varieties, which are the Common, the Flat-fruited, the Rough-fruited, the Forbidden-fruit, the Grape-fruited Barbadoes, the Round-fruited, and the Thick-leaved.

Use.—The same as the Lemon, together with being used largely as a preserve and sweetmeat. Kept whole, in syrup, it forms a handsome addition to the dessert when other fruits are scarce.

5TH. CITRUS DECUMANÆ (The Shaddock). Native of India. This is the largest-growing tree of the genus, and has the largest leaves, flowers, and fruit. In Japan, the fruit grows as large as a child's head.

The varieties are small in number. There is but one in Italy, four in France, and four in England;

namely, the Common, the Rough fruited, the Largest-fruited, and the West Indian.

Use.—This is the least useful of all the tribe, but the juice is sub-acid-sweet, and as the rind is very thick, it is a good fruit, keeping well on long voyages. It is very ornamental, both on the tree and on the dessert-table. Its leaves are very large and handsome, and of the darkest green. It is a very proper plant to cover a back wall in a conservatory. It is a native of China; hence it is nearly hardy; yet it thrives well in the West Indies. It was carried there by a Capt. Shaddock, from whom it has derived its name. T. APPLEBY.

(To be continued.)

BEE-STANDS.—Discard the idea, if possible, that it is necessary to raise them two or three feet high. Let us look at some of the disadvantages. In the course of the spring and summer, there are many damp and many chilly days when bees issue and obtain a load of honey and return, endeavouring to strike the entrance, but being chilled, their flight is uncertain, especially if windy; they miss the stand and fall to the earth, benumbed beyond the possibility of regaining the hive, and by the next morning are dead. (This effect is readily perceived during spring months by a little observation.) Hundreds are lost from each stock thus situated; such loss from a few hives would soon make enough for a swarm. Although not readily perceived, yet it is downright loss, and five dollars saved by a little contrivance *here*, is as good as by any other means. For the stand, select boards some 16 inches wide, cut the length of two feet; cut off some pieces of joist, three or four inches square, as long as the board is wide, and nail each end of the board to one of these pieces; this is laid directly on the ground, as many feet from the next one as limits will allow. The hive is set on one end of the board, the other projecting in front some eight or ten inches, giving the bees an alighting board very convenient; none can miss it, or, at least, get below it; they can creep to the hive often when it is impossible to fly. Being close to the earth, the wind affects them less. When not protected by fences, buildings, or anything else, something for the purpose should be put up, and in this case need not be so high by three or four feet.

The only objection that can be urged against this plan is, the little trouble necessary to keep down the grass and weeds that will grow about the hive; but if a man can earn money by labour of any kind, he will be as amply remunerated here by saving an incredible number of bees. For a cover, nail together two boards, like the roof of a building, some eighteen by twenty-four inches square. It possesses this advantage over a bee house; being moveable the sun can be allowed to strike the hive in spring and moderate weather; in hot weather it can be brought forward, shading the south side, &c.

In giving these economical suggestions, I would say that it is not a fanciful theory, but the result of practical experience. It is not only the few dollars saved by a more economical arrangement, but the thrift of the bees is actually beyond those on the other plan. I have tried both, and if the closest observation for twenty-five years affords any valuable hints, these are entitled to some consideration.—M. QUINBY, *Author of Mysteries of Bee-keeping, Palatine Church, Mont. Co., N. Y.*—*American Country Gentleman.*

THE VALUE OF HOMELY CONTRIVANCES.

FLOWER-GARDENING, at the present day, despite what is said to the contrary, cannot be effectually carried out without a considerable quantity of those tender or half-hardy plants which, in technical phrase, we denominate "bedding plants;" and as the propagation and wintering of these are important affairs, I here mention a few points which, in practice, I carry out, having as large a share of that work as most people; and, consequently, am obliged to adopt all the shifts I can in the winter and early spring months. But I will first of all mention the uses to which an out-door bed is applied,—it is simply a long bed in the middle of the kitchen garden, not near any wall, and its homely make is in no respects any disadvantage to it; in fact, it is a long bed on the surface of the ground, with a boarded back and front; the one a little more than a foot high, the other less,—the inclination of the ground making up a few more inches of descent; the two ends are also boarded.

This long bed is worked pretty hard; for in the autumn I sometimes put in *Rose cuttings*, and half-hardy or choice *herbaceous plants*, to stand the winter; and last autumn I put in a quantity of *Calceolaria cuttings*, which, but for the extraordinary severity of the weather, would have done well; as it was, about one-half or more withstood it, with only a double light over them, and a covering of snow part of the time. Those which did stand were the best plants I had in May; but the great bulk of my *Calceolarias* were in large seed-pans, of twelve or thirteen inches diameter; in these, from fifty to sixty plants were stowed until the end of March; they were taken out and planted in rows, some three or four inches apart in this bed, which I forgot to say is about six feet wide; good, mellow soil, improved with leaf-mould, was given them, and by the middle of May they had formed nice bushy plants with good balls. Some other kinds of plants that had filled their pots were also turned out here; but no plant does so well as *Calceolarias*, unless it has previously been in a pot, and its roots have got well matted to the ball. *Geraniums*, *Verbenas*, &c., shaken out from the cutting pots, grow away very well, but their long, straggling roots are sadly against their removing with anything like a ball; whereas, *Calceolarias* put forth a sort of a tuft of rootlets all of a length, and clasping amongst them sufficient earth to ensure their removal with very little loss; but single plants of *Verbena*, or anything else that are rather pot-bound, do exceedingly well when turned out into such a bed, emitting a quantity of young roots, which take up well with the plant when the proper season arrives for its being planted in its final destination; however, I may add, that the bed was soon crammed full, and as the planting out of such things is rarely all performed at once, a few being always left over to make up deficiencies, &c., it was usually the beginning of June ere the bed could be cleared for the next crop, which has often been a nursery-bed for *Celery* plants, sometimes ridge, or rather frame *Cucumbers*, and sometimes summer cuttings of such things as *Heartsease*, *Phloxes*, *Pentstemons*, &c.; whichever way it was, it was generally fully occupied; the *Celery* and cuttings getting removed by the middle of August, when it was wanted again for the *Scarlet* and other *Geraniums* used in bedding out, of which several thousands were put in at various times up to the 10th of September. These remained until the first week in October, when they were taken up and planted thickly in large, wide-topped pans, and stood the winter in such houses as were at liberty to receive them. *Geraniums* requiring a much drier atmosphere to winter in than *Calceolarias*, the bed is then again at liberty to receive the *Calceolarias*, of which I purpose this autumn to put in a large quantity, as well as *China* and other *Roses*. The

latter, however, ought to be in a little earlier, then the bed is at liberty to receive them, so I have generally had them elsewhere.

From the above, it will be seen that the bed is hard at work the whole year; of course, the soil is in a great measure changed with each crop; but this is easily effected in the kitchen-garden. Some old spare lights are also laid over it at times; and when shading is required, the glass is coloured white with a bricklayer's white-wash brush; but it is seldom all covered with glass, some other protection being thrown over the remainder. I may observe, that it would be much better were such a bed backed by a high wall, as I have experienced much difference where similar plants were placed in such a position, but I could not have it so here; however, it answers tolerably well, and is hard-worked the whole year.

Having described this useful bed, the contents of which assist so much in the general summer and autumn display of the flower-garden, I may add, that the plants I use for winter and early spring are neither numerous nor difficult to propagate. I think I had several hundred plants of *Alyssum saxatile*, and a yellow variety of *Cheiranthus Marshallii*, both especial favourites of mine, as looking well whether in flower or not. A yellow *Heartsease* I also plant extensively, as well as some other kinds, and the white flower, *Arabis verna*, comes in early; as does also the *A. deltoida*. *Wallflowers* of a good, single kind are also useful, as their appearance in winter is agreeable. *Cineraria maritima* is also useful, and several annuals, the best being *Nemophila insignis* and *Virginian Stock* for early flowering; but I have not been able to make much of *Polyanthuses* or *Primroses*, the soil not seeming to suit them; so that even seedlings planted out carefully in autumn, with good balls, did not flower satisfactorily; still, at same time, I have no place in reserve sufficiently cool and damp for them in summer. *Double Catchfly* are also planted, only they are much later; but their pretty appearance is such that I invariably plant some of them, and also the *Double White* and *Purple Rocket*. *Stocks* I have not been able to preserve against rabbits; but some other plants I have tried with more or less success; in fact, my guide being to have the earliest flowering ones that would move easily; but somehow, I have not been able to accomplish that with every one. The *Winter Aconite* and *Hepatica* do not do well with removal, and the various kinds of sweet-smelling *Violets* are not sufficiently gay to have a place here; but I have for many years had a bed or two of the common wild *Primrose*, which yields to none for beauty at the proper time. Bulbs, of course, are planted in more or less quantities, but they are not the most useful things, as the bed is naked for so long a period; whereas, *Wallflowers*, *Catchflies*, and *Cheiranthuses* look well the whole winter, and the appearance a plant has when not in bloom is now beginning to attract that attention which it deserves; so that we may, perhaps, discover many useful and ornamental plants amongst the most common ones, if we only direct our attention that way.

For instance, what foliage has a more striking effect than that of the common *Globe Artichoke* and *Asparagus*? while, for winter plants, I have often wished the foliage of *Red Beet* would remain a little more fresh, as it certainly would be an acquisition; but as every year adds a little that way, it is possible we may in time keep our flower-beds as attractive in early spring as in summer; not that I ever expect to see the mass of bloom at that time as in September; still, the diversity of foliage and other features may have beauties to those who are not led away entirely by the gaudy display of colours without diversity. But I will, at a future time, make further remarks on this head; suffice it to say, that the

amateur will be able, from what I have written, to make some homely shifts to furnish himself with ornamental plants for his garden as well in summer as winter.

J. ROBSON.

MONSTER MUSHROOMS.—A Mushroom has been found in Tatton Park, Cheshire, more than 30 inches in circumference. It was of great thickness, and weighed rather more than 13 ounces. A larger one than this has, however, been found in a field near Moorthwaite: its circumference was 42 inches and its average thickness $2\frac{1}{2}$.

NOTES FROM PARIS.—AUGUST 29.

SINCE I sent off my last communication the weather here has been dry and warm; often, indeed, oppressively hot. A gentle shower of about half-an-hour's duration fell on the 24th, the day of the grand review in honour of the Queen, just enough to lay the dust in the Champ de Mars, then fine weather continued up to three o'clock this morning, when there was a heavy fall of rain, and we have had incessant rains with a clouded sky all day. Yesterday, about two o'clock, there was a sudden sharp gust of wind for about twenty minutes, which took people by surprise, and tried doors and windows not a little. It is, perhaps, worthy of note, that there has been little or no thunder near Paris this summer, but a good deal of "sheet lightning" in the evenings. It is fortunate that the harvest operations are now nearly quite completed in this quarter.

The Vine disease has been reported from Languedoc and Bordelais, but not to any great extent. It has not appeared near Paris, and I think there is not much probability of the crop in general being injured now. The markets are well supplied with Grapes, both white and black, and the samples I have seen are very good. The sort at present most common is the *Chaselas Blanc* and *Noire*. It is selling at 6d. a pound, and upwards. This was seen in the principal fruit shops a month ago, but now it is plentiful everywhere. There is, in particular, a great abundance of green and purple Figs at present, and these are selling as low as eight and ten sous a dozen. The former is the *Figue blanche*, and the latter the *Figue violette*. The Apricots (*Abricot commun*, or, *Plein vert*) has also been plentiful and good. The name *Plein vert* has been given to this variety, most probably, from the fact of its being always grown in the open ground, and I have seen trees of it twenty-five and thirty feet high. It is seldom or never grown against a wall, or an *espalier*. In general, the side exposed to the sun is much spotted and freckled with red and black, but the flavour is good. Of Apples there are now several sorts in the market; one of the earliest was that called here *Pomme Pigeonnet*, a pretty crimson variety, of moderate size and agreeable flavour. The Jargonelle Pear, and one or two more sorts are also common. Of Plums, the most esteemed are the *Reine Claude* and the *Prune de Monsieur*. These are selling at fourpence a dozen and upwards. There has been a tolerable supply of Peaches during the last fortnight, but as yet the prices have been high, compared with former years. The cheapest that are to be had, and these are not very good, cost six and eight sous a piece (3d. to 4d.). The better samples sell at about fifteen and twenty sous each ($7\frac{1}{2}$ d. to 10d.). Of Melons there are two sorts in great abundance; these are the *Cantaloup*, and the *Maraicher*; the former regularly furrowed all over, and the latter quite round. Both are from six to eight inches in diameter, or perhaps more. They may be had as low as a shilling a piece, but the better and larger samples are selling at from three to four shillings (about five francs). The *Cantaloup* needs no explanation, as it is well known, but I suspect the *Maraicher* is only known under that name by the market people. I am at present unable to make out its real name. *Cucurbita pepo*, called here *Potiron*, and *Cucumis citrullus*, known as the *Citrouille*, are both much in use among the people for soup.

Although fruit is much less plentiful this year than it has been for several seasons, it is some satisfaction to know that

with the single exception of Turnips, all sorts of vegetables are exceedingly abundant and good. It follows, that the prices are not more than half what were paid last year. During the last month Potatoes have much improved, and as a great extent of ground has been planted this year, an abundant supply is insured.

There is also a heavy crop of Carrots and Cabbages of different sorts. Haricots, too, which are much liked by the French people, have rarely been so plentiful.

The flower dealers have had a brisk time of it for the last fifteen days especially, and on one or two occasions the supply was scarcely equal to the demand. Of the many occupations to which the Queen's visit has given an impetus, *les marchandes des fleurs* have particular reason to be satisfied, for the total of the money paid for bouquets and plants in pots must have been enormous.

At present, the *Reine Marguerite* (China Aster) Dahlia, Hollyhock, and Hydrangea, are the principal sorts in vogue; but there is no lack of variety. Young Orange-trees, Pomegranate-trees, Fuchsias, Heliotropes, Jasmins, Nasturtiums, *Cobaea scandens*, Clematis, and late Roses, combine to make a good show.

The directors of the Universal Horticultural Exhibition in the Champs Elysée, have published every week since the 1st of July, a *livret* or catalogue of the Exhibitors and their contributions. It is, to be sure, but little more than a list of names and addresses, but it is accompanied with a plan of the ground, in which the houses, beds, and plots are numbered, and in this way it is easy to ascertain the name of the owner of any particular collection, as well as the objects which he exhibits. It is also easy to find out where any exhibitor's collection is. This catalogue is very good so far as it goes; because, for the most part, the flower-beds are changed every week. But there are many things which are permanent, and about which a detailed account would be both interesting and instructive to all. It is, therefore, to be hoped that the directors contemplate something better than a mere list of names, especially for the machines, implements, and other objects exhibited in what is called the *Tente de l'Industrie*.

As far as my opportunities have enabled me, I have collected the materials for a notice of such inventions and contrivances as merit particular mention, and this I shall prepare as soon as my leisure will permit. With respect to the exhibition of plants and flowers, there is very little to note which would not be unnecessary repetition.

In the "Annex" of the *Palais de l'Industrie* there are many fine agricultural collections, particularly that sent from Algeria, and which contains examples (*of this year's growth*) of the principal products of that rich and fertile country, both in their natural and prepared state, including a good assortment of tropical fruits, but, unfortunately, the scientific names are not given, and it is difficult to identify many of the specimens. This is particularly the case with the several sorts of flour and similar preparations, as well as grains and fruits.

It is very clear that there is yet a great deal to be learned as to the manner of exhibiting. Where is the utility of setting down a number of things of this kind for the gaze of the public, without such information as the public are likely to ask; without a short statement of history, merit, use, time of introduction, by whom raised, or discovered, and, above all, the correct scientific name, when it can be given, or the correct name of the plant from which the particular preparation is obtained? Without the means of identification, those likely to take an interest in such matters can make but little use of other details respecting the objects exhibited. In the present case, I endeavoured to ascertain from what varieties of grain the Algerians obtained their flours and meals, which appeared to be different from anything I had seen in England, but I was obliged to give up the pursuit of my object. We cannot expect information of this kind in an official catalogue.

In the English department, the Board of Trade have an extensive collection of the same kind, and the different objects are all neatly and accurately labelled, but the numerous cases of artificial fruits and roots are particular objects of study. With some few exceptions, the varieties are all named; but in many cases, the labels being wrongly placed cannot be read.

Here almost everything that can interest the agriculturist, except, of course, live stock and machinery, is to be seen, and a great deal of information may be obtained. "But," observed a French gentleman to me, as he was admiring this collection, "Monsieur the Board-of-Trade, *N'a pas attaché son adresse, afin qu'on puisse lui envoyer des commandes.*"

It may interest some of your readers in the north to learn that Mr. George Shepherd, of Montreal, who had at one time the direction of an extensive nursery in Scotland, has contributed an admirable miscellaneous collection, including seeds, fruits, woods, and similar products of the garden, farm, and forest. In connection with these, Miss Anne Lawson Shepherd has contributed an extensive series of coloured drawings of the best varieties of fruits, as Apples, Pears, Plums, Grapes, native Orchidaceous plants, and cultivated roots of the farm and garden. These figures, though wanting in professional finish, are faithful representations, and highly creditable to Miss Shepherd, who has not only so far cultivated a delightful and useful art, but sent her performances to illustrate the pomology and botany of her adopted country. Apart from this, Mr. Shepherd has set an example which it would be well if other exhibitors were required to follow; he has sent a list of all the objects in his collection; not only giving the correct scientific names, but the popular English names, and their French equivalents; also, the natural order to which they belong. From this list, we learn that there are eleven varieties of Vine cultivated in the open ground at Montreal; and the eight orchidaceous plants figured are all natives of the island. These are *Cypripedium spectabile*, *C. parviflorum*, *C. acaule*, *C. arietinum*; *Calypso borealis*, *Pogonia ophioglossoides*, *Calopogon pulchellus*, and *Arethusa bulbosa*.

In the same department, or court, are two collections of Canadian woods, the one contributed by Andrew Jackson, Esq., of Kingston, Canada West, and the other by John Sharples, Esq., of Quebec. With these contributions, which together comprise about a hundred specimens, carefully prepared, are descriptive lists for distribution, containing names and synonymes, with a statement of the particular purposes for which the wood is used in Canada. It is clear that the Canadians understand the true uses of an exhibition, apart from the question of honourable mention and rewards.

In the court of contributions from Vienna there are some admirable examples of nature-printing; the subjects being, of course, Ferns, Algæ, and the like. I should think that artists, as well as other people, must hail the introduction of this new process of representing these objects, the delineation of which, by the hand, is exceedingly tedious, and seldom repays the time and labour required.

The Experimental Exhibition, referred to in my last, took place, as announced, on the farm of Trappes, near Paris, under the auspices of Prince Napoleon. A great number of distinguished agriculturists from different countries, and many of the literary and scientific stars of France were among the privileged. This was, certainly, a grand affair, and conducted in grand style. Smith, Howard, Clayton, Crosskill, and Ransome, most ably maintained their reputation and the honour of England. McCormack, of America, and Duvoir, of France, were also very successful. The reaping and farming machines astonished and delighted all.—P. F. KEIR.

VEGETABLE CULTURE AND COOKERY.

ANGELICA.

THE situation in which Angelica succeeds best is by the sides of ditches, ponds, and other damp places. The seed is sown in August, either broadcast or in drills, and when the plants are six inches high they are to be planted out, two or three feet apart, in the places they are intended permanently to occupy, and in a wet or damp soil, as indicated above. In May following, the stalks of the leaves are cut for candying, and the plants, if allowed to run to seed, will soon afterwards die; but if the seed-stems are destroyed as they begin to appear, the plants will send out fresh shoots, and in this way may be preserved in the ground for two or three years.

The blanched stalks of this plant were formerly used as a salad, in the same way as Cardoons and Celery are; but now it is cultivated only for the ribs of the leaves and tender stems, both of which are candied for a confection.

ANGELICA CANDIED.—Take the stalks of Angelica when it is a good size, and clear off the leaves. Cut them into equal lengths, throw it into water, and boil it till it is quite tender. Then peel it, boil them again, and let them simmer till green. Take them up, dry them with a cloth, and to every pound of stalks put a pound of sugar. Lay the stalks in an earthen-pan, and strew all over with the pounded sugar, and so leave for two days. Then boil till the Angelica is clear and green, and put it in a cullender to drain. Beat another pound of sugar to powder and strew it over the Angelica; then lay it on plates, and let it stand in a slack oven till it is thoroughly dry.

ANGELICA PASTE.—Take young and pithy Angelica stalks, boil them till tender, drain and press all the water out; beat them in a mortar to a paste, and rub it through a sieve. Next day dry it over the fire, and to every pound of paste put a pound of powdered sugar. When the paste is hot, add the sugar, stirring it till thoroughly mixed, over a gentle fire. Drop it on plates, dust a little sugar over them, and dry them in an oven.

ANGELICA TARTS.—Take an equal quantity, by weight, of Apples and Angelica stalks. Pare and core the Apples, and boil them in just enough of water to cover them, with sugar and lemon-peel. Boil gently till they become a thin syrup, and then strain it off. Then put the syrup on the fire with the Angelica in it, and boil for ten minutes. Lay at the bottom of the dish a layer of Apples, then a layer of Angelica, till it is full; pour in some syrup, cover with puff paste, and bake in a very moderate oven.

ANGELICA JELLY.—Wash and dry two ounces of Angelica roots; cut them in pieces, and throw them into boiling syrup made of three-quarters-of-a-pound of sugar, to which add an ounce of bruised Angelica seeds; cover the mixture close, and when cold add half-a-glass of the best brandy, and a drop or two of the essence of almonds, just enough to flavour it, and pass the whole through a tammy. Then add to it an ounce of isinglass, stirring it gently with a silver spoon. Set a mould in a tub of ice, and see that the ice touches it on all sides; pour the jelly into the mould, and cover it with a saucepan-lid, which must also have ice over it; let it remain for three hours in the ice, and when you wish to take it out, dip it for a few seconds in boiling water, and turn the jelly out on the dish for table. In making this jelly, tinned or pewter vessels or spoons must not be used, as they would impart a violet tinge, whereas it is intended that the natural light green colour should be preserved.

ANGELICA RATAFIA.—Take three quarts of brandy, one pint of river water, three pounds of sugar, two ounces of fresh-gathered Angelica roots, and of cloves and mace one drachm of each. Wash and dry the roots well, cut them in slices, and put them with the spices, bruised, into the brandy to infuse for three weeks; then strain it, and having added to it the sugar dissolved in the water, filter and bottle it.

EVERGREEN EDGINGS.

BEING a great admirer of *Berberis aquifolia* and *Berberis repens*, as under-cover, also for facing-up shrubberies, and forming the outline and edges of shrubbery walks; in fact, to see this useful, beautiful, and accommodating plant in the right place; and though I have great faith in Mr. Beaton's veracity, even to the description of the dress of an empress; still, I am not quite satisfied that *Berberis aquifolia* is so easily kept in harness as my old friend holds out. Perhaps he will have the goodness to inform us how he manages the roots. If the ground is good, it will send up suckers under his treatment like *St. John's Wort* or *Quick*; and if the soil is bad, if not in the shade, its leaves will look brown and rusty half the year. Besides, where edges must be close and neat, it will require to be cut two or three times in the season; and though one of the hardiest of plants, under natural treatment, under the above the frost will be sure to destroy the young heads.

I, for one, should prefer the common green *Holly*, or,

rather, a small-leaved variety, which can be kept very neat and low with little trouble, particularly if a little attention is paid to the preparation of the soil before planting, or, where present expense is not an object, to place slates the width of the edge required—say one foot under the surface. The roots could then be easily kept within bounds, by running the spade, or a tool something like a hay-knife, with a tramp on it for the foot, along the sides once in the season.

I am surprised the beautiful variegated varieties of *Hollies* are not used by those who prefer borders to these clumps. Where can be found anything like them for their permanent colours, defying all weathers, their variety of foliage, and the close and compact habits so applicable to this style of gardening? I should like to see them patronized at Sydenham, where there is scope to show them to advantage.

Allow me to say, in conclusion, that the common *Savine* will make a splendid broad edge for walks in cemeteries, and can be kept close and compact without much trouble.—D. FERGUSON, *Stowe, Buckingham.*

THE HOUSEHOLD.

(We shall be much obliged by any of our readers sending us approved receipts in cookery, hints for household management, or any other domestic utilities, for insertion in this department of our columns.)

PRESERVING KIDNEY BEANS.—As you ask for useful receipts in Household affairs, and as you tell us, in your last number, there never was known so great a crop of *Kidney Beans*, I think it a good opportunity to tell the world that they may easily and cheaply be preserved for eating all through the winter. I do not pretend to point out anything new, but I feel satisfied there are many who are not acquainted with the process. The Beans must be strung and cut in the usual manner, and then placed in an earthen vessel, alternating the layers of Beans with layers of salt till the vessel be full. The salt soon dissolves, and forms a *brine*, which preserves the Beans. Such vessels (here called *crocks*) can be bought from 6d. to 1s., according to the size, and as salt is so cheap, you will agree with me that the process is a cheap one. The Beans should be taken out a day before they are boiled, well-washed, then placed in water, which water should be changed two or three times, by which means the salt will be completely removed, and the Beans will be as fresh and as good as if newly-gathered.—J. HILDER.

ASPARAGUS OMELET.—Some of your readers may be misled in trying to make the Asparagus Omelet as described in page 355. I have no doubt that they might make something very nice, but it would not be an Omelet as known in France. Instead of the largest and finest Asparagus, use that called “sprue,” and proceed in the way described in the same page for Asparagus Peas, only leaving out the eggs. The knack of making a good Omelet is to have the pan well heated previously to putting the butter in, and then not too much of it—about one ounce-and-a-half to four eggs. Beat the eggs well up with a salt-spoonful of salt, and half that of pepper. When the butter is melted add the eggs; keep stirring it with a spoon or fork. When nearly done, flatten it out, lift up the handle of the pan so as to give it an inclination; take two tablespoonfuls of the Asparagus Peas hot, place them in the centre, turn half the Omelet over them, and turn out on a dish, and serve.

WINDSOR SOUP.—Asparagus being out of season we cannot try it now; but the following, being in season, some of your readers might wish to try. It is quite new. I have looked through my collection of 150 cookery books, but cannot find it. I shall call it the *Windsor Soup*. Take about four quarts of new Windsor Beans, four leaves of garden Sorrel; boil them in plenty of water, with a piece of bacon of about 2 lb.; when done, take them out, and pulp them through a coarse sieve; put what has been pulped into a stew-pan with sufficiency of water, in which they have been

boiled, to make it thick; add two spoonfuls of salt, one of powdered sugar, a teaspoonful of pepper, one sprig of Tarragon, and one flower of the French Marigolds; boil twenty minutes, and serve. Serve the bacon separate. This is economical and good.—G. W.

EDGINGS FOR WALKS AND BORDERS.

UPON this subject, permit me to relate what I witnessed on a visit to the far-famed gardens at Blenheim, last week. His Grace the Duke of Marlborough has the neatest border or edging to some of his flower-beds imaginable. I learnt that they were formed from the Acorns of the Turkish or Turkey Oak. The seedlings, neatly clipped every year, and kept down to a height of ten to twelve inches, form a truly elegant bordering, and are, I understood, from the civil and enlightened gardener (Mr. Mac Morran), universally praised and approved.—HYMENOPHYLLUM.

HOYA CARNOSA AS A WINDOW-PLANT.

You say, in your answer to correspondents, Aug. 21st, that you do not think the *Hoya Carnosa* would thrive in a room-window. I beg to say there is a plant of that kind, and a very flourishing one it is, growing in a cottage-window near this town (Tonbridge). It does not blow so profusely as in a stove, but I have frequently seen blossoms on it.—J. HILDER.

BULWICK PARK.

In the grounds of T. Tryon, Esq., Bulwick Park, Northamptonshire, is a plant of the *Yucca gloriosa*, or Adam's Needle, having two fine spikes of flowers; and when planted in the spring, 1852, it had not a single root, being the old stem, broken off, above ground, from a plant that flowered in 1849, with all shoots and suckers removed to form new plants. In 1853 another plant flowered, making three in six years; and there is every prospect of a pair of fine plants flowering in 1856, that were suckers removed from the plant that flowered in 1849.

It is very probable there is no place in this country where so many have flowered so young and in so few years. What a contrast in age with one that has flowered, this year, at Seaton, in Rutland, some five miles n.w., that is reported to be twenty years of age!

If I shall not trespass on your valuable space, I think a few notes on the gardens at Bulwick might interest some of your numerous readers, who like to see and hear of a good display of flowers, particularly in the mixed borders, which reflect great credit on Mr. Kidd, the gardener. Here is a broad walk, six feet wide, with borders on each side, the same width, backed with a fine Holly hedge; the walk is 150 yards long, leading to the Park, through the centre of the kitchen-garden, to a pair of fine wrought-iron gates, that are supposed to be two hundred years old, and for beauty of workmanship and their good preservation may be classed with any of the present finest manufactured; but the display of flowers, which consists of Hollyhocks, Dahlias, Phloxes, Achilleas, Solidagos, Pentstemons, hardy Fuchsias, Roses, Carnations, &c., it would occupy too much space to enumerate them all; suffice it to say, that by attention to keeping the soil in a healthy state by frequently stirring it, there are three full crops of flowers produced Spring, Summer, and Autumn. The display of the latter is now the admiration of all who see it.

The flower-garden here, which is on the old terrace style, is highly worthy of commendation. I should like to enumerate all the plants employed for bedding, but must defer it. I saw two large and very striking beds that I thought worthy of imitation: *Dahlia Zelinda*, edged with a good white *Petunia*; and the old *Tournefortia Heliotropioides*, edged with *Gorteria uniflora*.—OBSERVER.

QUERIES AND ANSWERS.

GARDENING.

STRAWBERRIES FOR FORCING.

"I have a lot of nice young Strawberry plants from last year's runners. The sorts are *British Queen* and *Keans' Seedling*. I have had the flowers and runners taken off as fast as they appeared this summer. Now, I want to take up two or three hundred for forcing; I should be obliged if you will tell me the best time to begin the work, and the proper sized pot to use. At the same time, do you think I shall be likely to get a good crop of fruit if the plants are carefully potted, and well attended to after they are potted?—A CONSTANT SUBSCRIBER, A. B. C."

[This correspondent has adopted the plan I previously recommended to those in cold situations, to the north of our midland counties, and to the south of them, in unfavourable circumstances. In this place, some thirty miles north of London, I have tried the plan adopted by our correspondent, and with runners of the present summer, and found no difference worth speaking about; the younger plants, if anything, yielding the best fruit. I have, however, had fine crops from older plants taken out of the ground, and with less preparation than this correspondent has given them. In any answer to the definite inquiries, I would say, 1st, There will be next to a certainty of a crop, if the plants are properly managed. That proper management will consist,

2nd. In potting the plants directly. Setting each plant into a 32-pot, if it can be squeezed in, and into a 24-pot if not, preferring, however, the former; potting them as firmly as possible, and keeping the buds or crown of the plant well elevated, little, if any, beneath the rim of the pot.

3rd. When potted, keep them shaded for a few days, until fresh growth is proceeding, and then place them in a position where they will catch every possible ray of sunshine. Nip off every runner as it appears. Never let them want for water, and use manure-water often. By the middle of October little water will be necessary, and the plants should be secured from very heavy rains by turning the pots on their sides. By the end of October, the pots should be wintered so as to be somewhat protected from frosts and heavy rains, the plants answering rather best when kept dryish, not *dry*, in their winter quarters. Few can spare glass for such a purpose; but the floor of a glass-house, or an unoccupied frame, or pit, may well be used for such a purpose when not otherwise needed.

4th. As this seems to be the first attempt, I would not advise commencing to force too early, say in February or March; and I would counsel putting *Keans'* into the forcing-house first. I have frequently gathered Strawberries at the new year, but they were chiefly for looking at. Good-flavoured ones can hardly be expected before the first weeks in March; and these must be commenced with before Christmas. Commence with a gentle moist heat, and raise the temperature gradually. A rough estimate may thus be given. Commence with from 45° to 50°; raise it gradually, so that when the plants are in bloom the temperature may be 55° at night, and 65° during the day; a little higher when the sun shines at mid-day, with plenty of air to set the fruit. When the fruit is swelling, give about 55° to 60° at night, and from 65° to 70° during the day. It is safest to err on the side of low temperature. If the plants are plunged at first in a mild bottom-heat growth will progress more quickly, and the flower-buds rise more strongly; but considerable experience would advise not to allow the plants to remain plunged so as the roots could get out into the bed, or, in early forcing, there is every likelihood

that the growing into leaf will get the upper hand of the setting and swelling of the fruit.

As soon as the plants approach the flowering period the pots should be raised and placed in a saucer, or on a hard bottom; rich surfacings and manure-waterings may be freely given after the flower-buds appear.

Strawberry forcing is well done round this neighbourhood. Young plants from runners of the previous year are almost exclusively used. Two modes are adopted. One, such as I mentioned, used by Mr. Forbes, of Woburn, namely, fastening the young runner on a little mound in the centre of a firmly filled pot, generally a 32. The other, is placing the young runner on the top of a 60-pot, cutting the string when the pot was full of roots, and then placing it in a 32-pot, and treated as recommended above. I generally adopt the latter plan; but I believe that the best plan of the two will be found to be the one that is best carried out, as first-rate crops are procured by either method. My runners have been obtained late this season, and are smaller than usual. Our correspondent escapes the labour of coaxing these tiny things into large well-ripened plants in the space of two or three months. I may add, that, for forcing purposes, I still prefer *Keans'* and the *Queen*, with the *Black Prince*, for earliness, and care should be given not to let the last have too much heat, as previously adverted to.—R. F.]

TIME FOR ROSE PLANTING.—PILLAR ROSES.—

PINUS NOBILIS AND CEDRUS DEODARA FOR A LAWN.

"Will you favour me with your opinion as to the best time, spring or autumn, for planting Roses as Standards? The gardeners hereabouts (Stamford) recommend the latter season; but having acted on this advice myself last year, and lost many of the trees through the severity of the weather, I should be glad of an independent opinion.—A NEW SUBSCRIBER.

"P.S.—Is there any simple method of protecting the newly-planted trees from the frost? Would you kindly mention one or two of the best sorts for Pillar Roses? Is the *Pinus nobilis* better suited than the *Cedrus deodara* as an ornamental tree for the lawn?"

[There are no two opinions among practical men as to the best time for planting Roses. Every nurseryman in the three kingdoms ought to have all his out-door Rose orders by the middle of October; and in return, he ought to put on as many men as would get them all up and off before Christmas-eve, beginning, invariably, on the 2nd of November, unless it fall on a Sunday, and to give out his plants in the order in which they are bespoke. A friend of ours, who is not far from a good Rose nursery, buys some every year, but never later than the 25th of September,—when he goes round all the Roses in the nursery, and picks out the best plants, of course, and puts a label to each, and insists upon receiving his bought plants on the evening of the 2nd of November;—and he knows what he is about.

Felicite perpetuelle is the best Pillar Rose, so called, but there are fifty better Roses that will do as pillar ones. We would select such of the best Bourbons and Hybrid perennials as could be pushed up to eight, nine, or ten feet high, in about five years, by good soil and management. We should then have the best Roses in pillars, though not the best pillar Roses.

Both the *Deodar* and *Pinus nobilis* are well-suited for a lawn, therefore choose which you like best; but if you buy the two, see you do not plant them for match plants, as both are matchless, and will only suit that way in duplicates.]

EVERGREEN FOR GREENHOUSE BACK WALL.

"X. will be glad to know what evergreen is recommended for the back wall of a greenhouse? She wishes to cover the said wall with something evergreen, and yet ornamental. She would like a handsome flowering plant. Camellias

would do, but she fears their growth would be too slow, as the centre of the wall to be covered is nineteen feet high; and the object is to have a green background, to show off the flowers on the stages."

[*Bignonia chirere* would cover the wall nineteen feet high, from top to bottom, and to any length beyond that of the Crystal Palace, in two or three years, if good stout plants of it were in a good, rich border, about five or six feet apart. Some people will tell you this is a stove plant, because Lady Grenville first flowered it in a stove; but it is just as hardy as *Cobæa scandens*. It is more than likely, however, that it would not flower on this back wall until it was very old; but as you only want a green back, it would be of little consequence. *Tecoma jasminoides* is the next best for fast covering your back wall; but it is ten to one if it would flower sooner than *Bignonia chirere*. Both would require a good deal of stopping and training till they covered the wall, and a great deal more of stopping after that; but both of them flower better on the last year's growth, if that is on *old spurs* which have been stopped for years and years; therefore, the secret is, to cut out all old wood on the *spurs*, leaving only last season's growth, at every winter pruning, and to stop *this growth* as often as it needs it every summer. On this very plan we flowered *chirere*, for years, in the coldest greenhouse; but *jasminoides* ought to be in the open air to bloom so freely. But on a good conservatory wall, and right pruning, it never fails to bloom; and such beautiful flowers! in long, clustered wreaths; but we never saw it in good bloom in-doors. While these were in progress, we would plant *Lophospermums*, *Maurandias*, *Heliotropes*, and *Cobæas*, between them, and prune them all back very close in winter. Are you aware that the common "Cherry-pie," or *Heliotrope*, is one of the best greenhouse climbers?]

PRUNING PASSIFLORA CÆRULEA.

"Having a blue Passion-Flower growing over the roof of my greenhouse (inside), which has now become very thick and bushy, obstructing air and light, although it is loaded with its beautiful and fragrant flowers, will you kindly inform me if I may prune it in; and if so, how close; and at what season of the year?—THEOPHILUS."

[There is no plant which stands better against the effects of the severest pruning than the blue Passion-Flower inside a greenhouse. You might cut out whole shoots any day during the summer. You might cut off every shoot and leaf on Midsummer day, and leave it as bare as a fishing-rod, without hurting it in the least, for it would soon be in full force again; but just at this season it would not be good practice to cut in the plant too much, because it would make new shoots of no use; but you may thin the plant as much as you choose, and the shoots you leave on it may be cut down to one-half their lengths; and if they grow again, stop them before they can shade anything, and next January or February give them early pruning, by cutting back every shoot of young wood to just one eye from the old wood, unless you want to cover more space, and if you do, any of the long, young shoots of last summer may be trained in all except a yard or so of the top. If it is not a positive cruelty, it is certainly not a wise plan to keep all the head of a blue Passion-Flower inside a greenhouse all the year round. Can you not take out a square of glass somewhere to let out some of the shoots, from May till the frost comes, then prune and take them back to winter?]

RED INSECT TROUBLESOME IN AUTUMN.

"I shall be obliged if you can inform me what insect it is that is so troublesome to persons, particularly females, frequenting gardens, by burying itself in the skin and causing inflammatory pustules, with intolerable itching?"

"Some of my friends have been excessively annoyed by it, and have, on a needle's point, extracted several from the wounds they caused; but it is too minute for my vision, or for any glass I possess, to show me its shape or structure; all I can see is, that it is a living creature, in motion, and of a red colour. Country people, I hear, call it "the harvest

bob," or bug, it being very prevalent in the harvest fields.—T. M. W."

[The insect here alluded to is one of the *Acari*, or Mites. It is so minute, that if it were not of a brilliant crimson colour it would be not easily detected. It is the *Leptus autumnalis*, and commonly called "the harvest bug," either from its occurring at that period of the year, or for attacking the legs of the harvest men. This insect buries itself at the roots of the hair, and sometimes causes tumours, and even fever, but always great itching and inflammation.]

GLOXINIA CULTURE.—SOWING BERBERIS AQUIFOLIUM.

"Some time ago, you were so kind as to instruct me how to grow Gloxinias. I succeeded admirably to a certain point; my plants looked vigorous, and the foliage was very fine; but, for some reason, the flower-buds, when they had attained the size of a barley-corn, turned brown at the points and withered; the foliage still looks well, and I have a few flowers on them. Would you kindly state the probable cause, that I may try and be more fortunate next year? I shall follow the instructions in THE COTTAGE GARDENERS DICTIONARY for their general treatment.

"From your instructions, I have propagated some from leaves, which are still in the pots of sand. Please say how I am to manage them.

"I wish, also, to know if the seeds of *Berberis aquifolium* should be sown with the fruit upon them, or squeezed out first?—BERBERIS AQUIFOLIUM."

[The leaves of your *Gloxinias* looked well from present good management, and the flower-buds withered from former bad treatment. Let them go quietly to rest this winter, and next year you will reap the benefit of your present system. Keep those you have propagated from leaves in growth, or green, as long as possible; to the middle of January, if you can. When you cannot keep them longer green, dry them off, and leave them in the sand as they are till they come up again from next growth. Then, as soon as you see them coming, turn them out of the pots, and pot each one into a separate small pot, in very light compost.

As the *Berberis* seeds lie idly in the ground all the winter, it is best to sow them whole. Some persons affirm that all berries and stone fruit come better from seeds sown with the pulp on.]

MOOR-PARK APRICOT DECAYING.—TRAINING PEACH-TREES AND VINES.

"I have a fine *Moorpark Apricot* tree, which, three or four years ago, had one of its principal branches die. I cut it off close at the place from which it started, and painted the wound, which made an effort to heal; but I have discovered, to my regret, that from this place, half-way round, and three inches above and three inches below the arm is dead. Notwithstanding, its foliage looks very healthy, and the branch is supporting a good crop of fine fruit. What must I do with this to save my tree?"

[All that you can do is to clean out the dead wood round the wound, and to keep the opening from the air, as much as possible, by some moist plaister or another, such as cow-dung and dry lime-dust; or, indeed, anything to keep the air from the wood.]

"My *Peach-trees* are very healthy, and free from blight of all sorts, with a good crop of fruit—a thing which never occurred to me till I had the good fortune to meet with THE COTTAGE GARDENER—but some of the shoots are much shaded with their own leaves. I have pushed some of the points of these under a neighbouring shoot, and some I have pinned to the wall with a nail, so that the solar rays fall with all their light, and beat upon the body of the shoot: but will this arrangement of their leaves derange their functions injuriously?"

[It is part of Mr. Beaton's creed to cut in two every leaf which hangs over another leaf, or shades a soft part of a shoot, on stone-fruit against a wall, as early as the 20th of August. Healthy *Peach-trees* produce about four times more leaves and shoots than ought to be allowed. You did wrong when you pushed the leaves under the shoots; you

ought rather to thin some of them out altogether, and to cut some as far as they shaded.]

"I have followed closely Clement Hoare's treatment of the Vine, and have had fine Grapes; but for the last two or three years I have fancied the close pruning he recommends, leaving only two bearing shoots and two of the current year's for future bearers, does not yield a sufficient amount of foliage to sustain the energies of the tree. Is it so? —EDWARD FAIRBROTHER."

[No; quite the contrary; but Hoare never recommended close pruning at all; and those who close prune Grapes in our climate, in the open air, are fighting against reason, experience, and Hoare's system; but you may extend each of your Vines to double the present space with advantage, by cutting out the rest.

Hoare is the best English author on out-door Grapes; yet he has mistakes and errors of principle.]

IS AN UNDER-GARDENER A GENTLEMAN'S GARDENER?

"Since the answer to this question was given, in p. 361, I have had several inquiries as to judgments made in a similar case. There is no difficulty about it; but still, I must say, that in the main, I do not see my way clearly to join in the opinion there announced, unless there was some peculiarity there not stated. I would at once have placed "the second under-gardener, who cultivates a plot of ground at his own residence for the use of his family, in the fourth class of 'cottagers and cottage gardeners.'" That the contest would not be equal, because he would have the advantage of seeds, plants, &c., from a gentleman's garden, is merely suppositious. He may have had such things, and so may the other villagers, and, perhaps, with benefit to neither. Cottagers who are particular in these matters will not trust to the seeds and plants that a gardener raises from seed supplied by a nurseryman or seedsman. The quality of the produce is often owing to the great care with which they save their own seeds and roots. I should, therefore, consider a second under-gardener, living in a cottage, and cultivating his plot of ground—as a mere cottager—a superior kind of labourer. I recollect priding myself as belonging to a *profession*,—as gardening was called. Small pride *now*, when every razor-grinder, corn-cutter, hop-step-and-jumper, is a professor, with a break-jaw name as long as my arm. In the palmy days of the Horticultural Society, young men got *riled*, and turned cranky upon going, because they were admitted *merely as labourers*. Our old worthies recognised no one as a gentleman's gardener, or having any right to the title of *Mr.*, until he had held a situation. Before that he was only plain Bob, Donald, or Sandy. Some big chaps used to have letters directed to them as gardeners to Sirs and Earls; but the more knowing ones used to poke rare fun at the unsophisticated vanity. One of my worthy old masters, on leaving, gave me a caution about this, as many gardeners might take offence at it, and advised me to have my letters addressed—The Gardens, of such and such a place. When the foreman, the only under-gardener recognised, used to have *under-gardener* on his letters, he was sure to run the gauntlet of a nice piece of chaffing, if there was no dread of his physical prowess. Even he would have been laughed at and badgered outright if he had called himself a gentleman's gardener. It is certainly a new thing in my experience for a second under-gardener to be called a gentleman's gardener. What havoc we should make in domestic service if our terms were used so loosely. The matter is trifling, but still it is worth ventilating. My present impression is—an impression on which I have frequently acted—that the second under-gardener is, in such circumstances, a cottager.—R. FISH."

[Having received the foregoing from our valued coadjutor, Mr. Fish, although we had not the slightest doubt that our decision was right, yet we laid the case and Mr. Fish's communication before Mr. Beaton, and the following is his reply:—

"You were quite right. When a man has worked twelve months in a gentleman's garden, he must be a dull, stupid fellow if he does not learn enough of gardening to put him up higher in the scale of gardening than another man who

has never seen a better garden than his own; therefore, the two would never compete against each other under the same letter or figure, if the committee had made out a proper schedule. Moreover, they should not so compete, for it would be an unfair competition. Some of our best and most amiable country cousins often commit great absurdities when they undertake tasks, without proper experience about shows and premiums. I had some experience of this many years ago, which led me to form a resolution which has puzzled many, because they did not know that I had made that resolution for myself. It is now seventeen years since I was at a provincial show for garden produce, and I never mean to see another. I have been driven away solely through the bad management of committees. I would have common sense, rather than the letter of the law, at all country shows. The law insists on it that every one who works in a garden should be called either an under-gardener or a garden labourer; those of them who 'live at home,' or have cottages and gardens of their own, the law equally insists on their being styled cottagers; but to put some of them upon the same footing for prizes as country labourers would be preposterous. I had under me, at Shrubland Park, six such gardeners, who were far better gardeners than nine-tenths of the head-gardeners you generally meet with in the middle class of life; and it is the same in all the large establishments throughout England. The very best of the six took a prize every year at Ipswich, as a common cottager, because the schedule did not make a proper classification of exhibitors. In other words, common sense was sacrificed, in order that 'our show' might run after some model show, which took the fancy of some influential talker on the part of the society.—D. BEATON."]

DICKSON'S EARLY FAVOURITE PEA.

PERMIT me to offer a few remarks on the above-named Pea. I consider, when nurserymen, or any one else, introduce a really good fruit or vegetable, they ought to have every credit for it. We are never very fast in buying new vegetables; but from the favourable report given of the pea by the Horticultural Society, I was induced to purchase a couple of quarts. One row was sown the 12th Feb., a little more than one quart of seed, which produced nineteen pecks heaped measure, of good Peas, each pod averaging nine peas in a pod, and in many of them we found eleven peas in the pod. A row of *Bishop's Longpod Pea* sown by the side, the same quantity of seed, and sown the same day, only produced eight pecks of peas. Many of these pods were not well-filled. The peas from *Dickson's Favourite* were sold at 11d. per peck. Your readers will agree with me this was a tolerable good crop. I consider everybody that grow Peas ought to have at least one row of *Dickson's Early Favourite*.—W. HILL, *Keele Gardens, Staffordshire*.

THE POULTRY CHRONICLE.

THE old saw says, "Practice makes perfect;" but it has not yet been defined what amount of practice is necessary to ensure it.

The experience of Poultry Shows would go to prove one of two things; either exhibitors are really blind to the defects of their own birds; or that years of practice are not enough to teach.

The office of Judge is always an unthankful one, but especially at this time of the year when the moulting season causes ample and florid combs to wither away; when what remains of the once brilliant plumage is poor in colour and quantity, and even the best birds are but shadows of what they were and what they will be.

But we contend, that even in their present "poor es-

tate," the best birds are easily distinguished, though denuded of feathers, because there is no great defect. On the other hand, no state of plumage, however good, can cover a capital fault.

We would, from these assertions, point out a few cases, which may, at a future time, help some of our readers. Two pens shall be exhibited side by side. In one, there shall be two pullets of exquisite beauty of feather and shape, a cock with a visible and marked defect. In the other, three birds almost below mediocrity. Granted, the two pullets in the first-named pen are worth a host of birds such as figure in the second; yet the prize must either be withheld or given to the second. Why? Because, however inferior they are, there is still no capital fault to disqualify. Say they are Polands, and the cock in the best pen has white legs; say they are Hambro's, and the cock has an imperfect comb; say they are Dorkings, and a fifth claw is deficient; say they are Cochinchina's, and the cock has clean legs; say, in any class, there is a hump-backed bird.

In every case here quoted no amount of merit can even allow the pen to compete; because, with competent Judges, they will be disqualified as soon as they are seen, and then pens of inferior value must take their places.

We often hear it said by an exhibitor, "My hens were so good, I thought I must take a prize." To such we say, If you wish them to tell, mate them with a bird below mediocrity, if you will, but avoid one with any capital defect. In most instances, the successful birds are handled by the Judges, and in all, scanned much more closely than exhibitors imagine. The sight of one of the Judges' books will reveal many defects in pens which their owners thought perfect, and will explain decisions which appear at first sight strange. It is after much conversation with some of them we have penned these remarks, thinking they would be eminently useful from their practical bearing. A good middle-class fowl will be more successful than one with every good point save one, if the absence of that one constitute a disqualification; yet the former shall not have one prominent merit.

NOTES ON THE ANERLEY POULTRY SHOW.

THIS large exhibition of Poultry and Pigeons was held in the Anerley Gardens, near the Crystal Palace, on the 28th, 29th, and 30th of August. There were 755 pens of poultry entered, and very few that were not filled; and 205 of pigeons, making in all a total of 960 pens, which were of the best construction I have yet seen, being made of boards on all sides, except the front, which was of stout iron wires; the roof was made slanting to protect the birds from rain, but the roof for such purpose was fortunately not required. Each pen was provided with a zinc water-pan and a green turf, which contributed much to the comfort and well-being of the inmates. The pens were whitened inside, and I noticed a few that had the back black (for the White Shanghaes) that showed the birds off well.

From the season of the year the birds were much in the moult, and did not appear so attractive as at other times. Of *Black Spanish* there was a good show, though much out of feather; many of the birds had extraordinary white faces, one in particular being so warted as somewhat to impede his vision. The chicken did not appear so forward as I

expected. I cannot but think this valuable breed is rather slighted by such committees who only give prizes for one variety. Surely, the White and Blue Spanish, or Andalusian fowls, are as worthy of prizes as the White, Black, or Grey Shanghaes ever were.

The Grey Surrey, or Poulterers' fowl, here rejoicing in their common title of *Coloured Dorkings*, were well encouraged, having four classes. Some of the unnoticed birds appeared to me better shaped than those that were noticed; still, I have no wish to dispute the point with Mr. Bailey, as undoubtedly he is better able to judge what form is most remunerative and trusses best, which will produce the most meat and least offal.

The *White Dorking* was also here in considerable numbers, and appears to be regaining the favour it so well deserves; but as these are, I think, the right aspirants to the name, being the veritable fowl bred at Dorking (whether better or worse), they ought, in justice to fancy and science, to be placed first on the list of Dorkings. I am sorry to see that the judges so far forgot themselves as to overlook form in this variety, and to award a first prize to a bird of Malay proportions. The second-prize bird was also too leggy. Size, which ought only to be of a secondary consideration, seemed to have caused this departure from good judgment. Neither were the combs of good rose form in a first and second-prize cock which I noticed; but whatever latitude is allowed to the so-called coloured Dorking in this respect, it is of the utmost importance in the true or White Dorking. I do not wish to say anything disparaging of the coloured as an excellent table fowl; but I think it right that each should receive their due honours in their proper place, and be judged by their own rules.

Next in order came the *Shanghaes*; and as I consider the dark reds and dark browns the original, if not the purest variety, I think they should occupy the post of honour of this breed on the prize sheet. Of browns and buffs there were some good birds. I noticed some *dark cinnamon* cocks with *light* hens. The white have certainly very much improved, and among the *grey* (which were here honoured above their deserts, by four classes and a silver cup, as *Brahma Pootras*) were some good specimens of the Shanghae breed; but wherever the vaunted pea-comb showed itself, there was the Malay visage.

The *Game* were well represented in all six classes; precedence was here given to the whites and piles, which should not be; the reds, duckwings, and greys, always had the preference with the cock-fighters, and, consequently, should stand first and alone on the lists; all other colours might then be allowed to follow. I was particularly struck with the absence of yellow legs, and the large size of some of the cockerels.

Malays were unjustly left out of the prize list, which is much to be regretted, as poultry fanciers owe much to this nearly forgotten breed. A few middling birds were shown in the various classes, but so sadly out of feather, as only, I fear, to bring discredit on this noble race.

I next come to the Bolton Bays and Greys (or *Hamburgh* classes); the Gold and Silver-pencilled seem to be improving. The awards in these classes did not give much satisfaction. In one case, a prize seemed to rest wholly on the ear-lobe of the cock, which was good; but the hens were of very inferior pencilling. In another case, the pencilling of a hen seemed the prominent quality.

The so-called *Spangled* birds are evidently in a state of transition, the Golden having no definite marking, that I could perceive; while the Silver vacillated between the White-necked Creels with creeled tails, and the Silver Moonies with dark hackles and tails. It is the confusing of the various markings under one denomination that spoils all; for it must be evident that as Mooneys, Creels, and Moss Pheasants, I think, are three different varieties, the mixing of those varieties must spoil the markings.

Class 31 brought me to the *Crested fowls*. The white-crowned blacks are improving, but have still too much black in front of their otherwise good top-knots, and their spiked combs, formerly much too prominent, are now much lighter.

What I call the Golden and Silver-crowned *Hamburghs* (or *Bearded Polish*), have also improved with regard to the fulness of their topknots; but the form of their marking is by no means decided.

In *Bantams*, the Golden-laced Sebrights stood first on the list; and among their ranks were many beautiful specimens (but may I ask the breeders, are the ear-lobes of this dwarfed Yorkshire Moss Pheasant of no account?). The Silver-laced seem to have lost their peculiar shade of colour, and to show only as lighter specimens of the golden; so generally was this the case, that I had often to turn to the catalogue to know if they were meant for golden or silver. Black Bantams were plentiful and good, as also the white, among which was a very good pen of single-combed feather-legged white, which I regard as the variety originally brought from Bantam. The clean-legged birds, I think, owe their origin to the Indian jungle fowls, or dwarfing of other sorts. Among the other varieties of Bantams were some Game Bantams, and a very pretty pen of white Game Bantams.

In addition to the Malays before-mentioned, the various classes contained a beautiful pen of white-bearded and crested fowls (*Polish*), also a good pen of *Turkish-crested fowls*, white, with beards, topknots, feathered-feet, and five-toes; likewise a pen of *Black Persia-crested fowls*, without tails. I also had a peep at Mr. Tegetmeier's various crested chicken, but was sorry to find they had joined the beard movement; nevertheless, the production of a white fowl with a black topknot is a feat worthy of notice.

In this class was also a nice pen of *Cuckoo Shanghaes*, some white *Silk fowls*, and some so-called *Black Hamburgs*, which looked like rose-combed Spanish, minus the white face.

Geese, *Ducks*, and *Turkeys* were here in considerable numbers; but I did not pay much attention to them, but hurried on to the *Pigeons*, where I confess I was somewhat disappointed.

Among the *Carriers* were some good birds, both black and dun. *Almond* and other short-faced *Tumblers* were few, but of good points, though in colour hardly up to the standard. *Bald-headed* and *Bearded Tumblers* were few, and nothing remarkable. *Owls* were more numerous, but though many of them had good pearls, they were mostly wanting in gullets. *Turbits*, some were good, but mostly too mousey. *Jacobins* much improving, but still too coarse. One pair of *White Faintails* were very good; but some were altogether as bad. Of *Trumpeters*, there were some very nicely mottled birds; but others were thin-headed, and mostly too short in body. Among the *Runts* there was one good pair of *Red Romans*; and among the *Dragons* a pair of white, otherwise good, but having black eyes. *Pouters* were out of feather, and much too rough-footed. Among the *Toys* there were a very clean-marked pair of *Nuns*, some *Archangels*, some *Suabian Spangles*, and *Frillbacks*, a very pretty pair of *Helmeted Tumblers* and *Turned-crowned Spots*, a pair of inferior *Laced pigeons*; and, what were new to me, two pairs shown as *Lahore*; the top of the head, back of the neck and wings of which were black, the rest of their plumage being white; they were of the shape and make of common pigeons, but novel on account of their plumage. There were also exhibited a pair of young wild *Stock Doves*; a pair of our native *Turtle Doves*; and also, a little, wild, dark bird, entered as bred from a Dove and a Pigeon; but the most unaccountable part of the business was, that persons should send birds not worth the entrance fees, and write prohibitory prices against them. I fear such proceedings show a lamentable ignorance of the rules of the fancy, and the properties of Pigeons.—B. P. BRENT, *Bessels Green, Sevenoaks*.

THE PIGEON PRIZES AT ANERLEY.

As an exhibitor at the late Poultry Show at Anerley, I feel much pleasure in testifying to the admirable manner in which the general arrangements were carried out, and for which both the committee and secretaries deserve great praise. At the same time, I think it only right, in justice to myself and other exhibitors, to draw your attention to an oversight on the part of the committee, in the first place, in offering a silver cup for competition for the best four pens of Pigeons. An error was undoubtedly committed in not specifying the descriptions to be shown. It will be found, on reference to the programme, the cup is offered for the best

four pens of pigeons of different varieties, leaving it entirely at the option of the exhibitor to show any specimens he pleased. Seven competed for this prize; and it may, perhaps, be argued by some, that as the pens for the most part contained birds quite dissimilar, it was a difficult task for the judge to arrive at a proper decision; the error in judgment, however, was, to an experienced fancier, so glaring, that no excuse can possibly be taken in palliation.

I am informed, on good authority, that the cup was first awarded to Mr. Weir, and afterwards to myself. And I am willing to admit that it was a nice point between the two; but what claim Mr. Eaton can possibly have to it, I am quite at a loss to understand. I beg to add, there were several gentlemen present, known to be first-rate fanciers, who expressed quite as much astonishment and disgust as myself at the judge's decision.

Another error on the part of the committee was that of appointing one judge only to award the pigeon prizes. Three judges were appointed for the poultry, and at any rate there should have been not less than two for the pigeons, and those carefully selected from gentlemen known to be fully competent to award the prizes according to merit. This is the way, and the only way, in which we may hope to keep up our several annual shows, and save them from being numbered among the things that have been.—JONES PERCIVAL, *Queen's-row, Walworth*.

TO KILL LICE ON POULTRY.—For one hen and a brood of chicken, take a lump of lard about the size of a walnut—mix with it a teaspoonful of Scotch snuff. Apply it by rubbing it well in with the hands.—*American Country Gentleman*.

DEWSBURY FLORAL, HORTICULTURAL, AND AGRICULTURAL SOCIETY.

THE annual show in connexion with this association was held on Friday, August the 24th, in a large field situate in Malkroyd-lane, Dewsbury, lent for that purpose by Mr. J. M. Thompson, the treasurer of the Society. The ground being considerably elevated above the town, views of extended character added much to the interest of the show and to the pleasure of the company. Owing to the unsettled state of the weather during the previous day, and a thunder storm in the night, the committee felt considerable anxiety as to the prospect of their exhibition. The society has made (during the last few years) very rapid advances, and promises fair to be the greatest show in the district. It is well deserving of all the success it has attained, for the promoters and committee are not satisfied to be mere silent spectators of the exhibition, but in nearly every class enter the ranks for competition; and notwithstanding the care of providing the necessary arrangements which devolves upon them, and also much personal labour, they are found, as the increased care of an increasing show rests upon them, to be willing to bear the burden. These remarks equally apply to the honorary secretaries, Mr. R. R. Nelson and Mr. J. Newsome. To the former of these two gentlemen the society stands largely indebted for the great assiduity with which he has attended to his office, and for the ability he has displayed in carrying out the details of the arrangements in his particular department.

With respect to the Poultry to be exhibited at this show, a glance at the catalogue was of itself a sufficient guarantee that the birds were of no ordinary merit, as it contained the names of Hustler, Dixon, Conyer, Rodbard, Beldon, Cannan, Ridgway, Marriott, Battye, and others, who have not been content merely to contest for prizes in their own immediate localities, but have won laurels at some of the principal shows in the kingdom. We regretted, at this time, to miss the treat of seeing the birds of Mr. Thompson, who has usually exhibited at this place. A long row of pens contained a display of poultry of very great excellence, and, considering the number, we may say a choicer lot has seldom been got together. The beautiful plumage, high condition, and all the minor characteristics which add to the

perfection of the feathered denizens of our farm yard, and amateur collections, were here to be seen. The annexed list of prizes contains the names of the successful exhibitors in the different classes. In pen 170 was exhibited specimens of the singularly beautiful birds *Serai Taook*; these were the property of Mr. Wm. Dawson, of Hopton. The *Rouen Ducks*, owned by Mr. Wm. North, of Huddersfield, and Mr. Hebblethwaite's Geese, were also highly meritorious. The *Cochin-China* fowls, though few, were good. In the adult *Spanish* class we rarely have seen as good birds got together. The *Hamburgh* classes were ably represented, and many good birds were necessarily precluded from taking prizes. The pen of Golden-pencilled, exhibited in class 13 by Mrs. H. Hickson, of Warburton, Cheshire, appeared to have arrived almost at the summit of perfection. Mr. Conyers and Mr. Battye maintained their reputation with white-crested black *Polands*. *Game* fowls mustered in great force, and contained good birds in all classes. We observed a pen of brown-red chicken, belonging to John Wormald, Esq., Dewsbury Mills, which are promising birds, but owing to their age were distanced by Mr. Fox and Mr. Ridgway.

The judges were—Mr. C. S. Floyd, Sands, Holmfirth; Mr. T. J. Wigney, Huddersfield; Mr. Wm. Smith, Kent House, Halifax; Mr. J. Tuley, Holycroft, Keighley; Mr. J. E. Dobson, Leeds.

The following were the prizes awarded—

COCHIN-CHINA.—Cock and two Hens.—First, Rev. G. Hustler, Appleton, near Tadcaster. Second, W. Newsome, Heckmondwike. Commended.—Rev. G. Hustler.

COCHIN-CHINA CHICKEN.—First, Rev. G. Hustler. Second, G. Brook, Huddersfield.

SPANISH COCK AND TWO HENS.—First, James Uttley, Copley Gate, Halifax. Second, W. Newsome. Highly Commended.—M. Ridgway, Dewsbury. Commended.—James Dixon, Bradford.

SPANISH CHICKEN.—First, John Beaumont, Dewsbury. Second, W. Newsome. Commended.—James Dixon.

DORKING COCK AND TWO HENS.—First, Rev. G. Hustler. Second, Rev. G. Hustler.

DORKING CHICKEN.—First, H. Exton, Huddersfield. Second, G. Brook. Commended.—H. Hemsworth, Lupset Hall.

MALAY.—Cock and two Hens.—First, Miss North, Huddersfield.

MALAY CHICKEN.—First, James Dixon.

GOLDEN-SPANGLED HAMBURGH.—Cock and two Hens.—First, G. Brook. Second, James Dixon.

GOLDEN-SPANGLED CHICKEN.—First, G. Brook. Second, R. R. Nelson, Dewsbury. Commended.—R. R. Nelson, Dewsbury.

SILVER-SPANGLED HAMBURGH.—Cock and two Hens.—First, James Dixon. Second, H. Beldon, Bradford.

SILVER-SPANGLED CHICKEN.—First, H. Beldon. Second, Job Vickerman, Chickenley. Commended.—James Dixon.

GOLDEN-PENCILLED HAMBURGH.—Cock and two Hens.—First, Mrs. H. Hickson, Warburton, Cheshire. Second, James Dixon. Commended.—Edw. Stansfield, Dewsbury.

GOLDEN-PENCILLED HAMBURGH CHICKEN.—First, Jas. Dixon. Second, Mrs. H. Hickson.

SILVER-PENCILLED HAMBURGH.—Cock and two Hens.—First, James Dixon. Second, James Dixon. Commended.—H. Beldon.

SILVER-PENCILLED HAMBURGH CHICKEN.—First, James Dixon. Second, H. Beldon.

POLAND (Black, with White Crests).—Cock and two Hens.—First, Thos. Battye, Holmbridge. Second, Jos. Conyers, Leeds.

POLAND (Black, with White Crests).—Chicken.—First, Thos. Battye. Second, Miss North.

GOLDEN-SPANGLED POLAND.—Cock and two Hens.—First, Jos. Conyers. Second, James Dixon.

GOLDEN-SPANGLED POLAND CHICKEN.—First, James Dixon. Second, Isaac Thornton, Kilpin Hill.

SILVER-SPANGLED POLAND.—Cock and two Hens.—First, W. Cannan, Bradford. Second, James Dixon.

SILVER-SPANGLED POLAND CHICKEN.—First, James Dixon. Second, M. Ridgway.

GAME (Black-breasted and other Reds).—Cock and two Hens.—First, H. Beldon. Second, G. Noble, Staincliffe. Commended.—E. Stansfield.

GAME (Black-breasted and other Reds).—Chicken.—First, W. F. Fox, Dewsbury. Second, M. Ridgway. Highly Commended.—James Dixon. Commended.—John Wormald, Dewsbury Mills.

GAME (Whites and Piles).—Cock and two Hens.—First, Mr. Ridgway. Second, John Craven, Alverthorpe.

GAME (Whites and Piles).—Chicken.—First, John Craven. Second, M. Ridgway.

GAME (Black and Brassy-winged, except Greys).—Cock and two Hens.—First, John Ingham Pilling, Huddersfield. Second, M. Ridgway.

GAME (Black and Brassy-winged, except Greys).—Chicken.—First, G. Noble. Second, W. M. Marriott, Dewsbury.

GAME (Duckwings and other Greys and Blues).—Cock and two Hens.—First, H. Beldon. Second, W. F. Fox, Dewsbury.

GAME (Duckwings and other Greys and Blues).—Chicken.—First, H. Beldon. Second, J. I. Pilling. Commended.—W. F. Fox.

BANTAMS (White).—First, H. Beldon. Second, James Dixon.

BANTAM (Black).—Cock and two Hens.—First, James Dixon. Second, Thos. Pearson, Holbeck.

BANTAM (Silver-laced).—Cock and two Hens.—First, James Dixon. Second, Wm. Cannan.

BANTAM (Golden-laced).—Cock and two Hens.—First, W. F. Fox, Dewsbury. Second, Philip Stead, Dewsbury.

Cock and two Hens.—First, Wm. Cannan, for Buff **POLAND**. Second, Joseph Conyers, for Black **HAM URGH**.

Cockerels and two Pullets.—First, Wm. Dawson, for **BRAHMA POOTRA**. Four months. Second, David Ramsden, for **GUINEA FOWLS**. Nine weeks.

AYLESBURY DUCKS (White).—Best Drake and two Ducks.—First, Wm. North, Huddersfield. Second, Wm. North. Commended.—George Naylor, Heckmondwike.

DUCKS (Rouen).—Drake and two Ducks.—First, Wm. North. Second, Wm. North.

GEESE.—Gander and two Geese.—First, S. W. Hebblethwaite, Mirfield. Second, S. W. Hebblethwaite.

TURKEY COCK AND HEN.—First, J. Mann, Heckmondwike.

EXTRA STOCK.—Commended, Matthew Ridgway, two **DORKING** hens.

PIGEONS.

Best Six Common PIGEONS.—First, S. W. Hebblethwaite. Second, Wm. Senior, Dewsbury.

Best pair of CARRIERS.—First, Wm. Cannan. Second, Henry Child, Birmingham.

Best pair of Common TUMBLERS.—First, Wm. Cannan, Bradford. Second, H. Child, jun.

Best pair of ALMOND TUMBLERS.—First, Wm. Cannan.

Best pair of BARBS.—First, S. W. Hebblethwaite. Second, Philip Stead.

Best pair of TURBITS.—First, Wm. Cannan. Second, Henry Child.

Best pair of JACOBINS.—First, Henry Child, jun. Second, Wm. Cannan.

Best pair of FANTAILS.—First, Henry Child. Second, Philip Stead.

Best pair of CROPPERS or POUTERS.—First, Wm. Cannan. Second, Henry Child, jun.

Best pair of ANTWERPS.—First, Henry Garforth, Earlsheaton. Second, Henry Garforth.

CALVERDALE AGRICULTURAL ASSOCIATION.

The Exhibition of this Association took place in Halifax, on the 25th of August, for the district comprising the parish of Halifax, and its immediately adjoining townships.

The following prizes were awarded for Poultry:—

GOLDEN PHEASANT HENS AND A COCK.—Divided between Joseph Hodgson, Erringden Grange, and Dan Leeming, Pellon.

GOLDEN PHEASANT CHICKEN.—Second, Dan Leeming, Pellon.

SILVER PHEASANT HENS AND A COCK.—First, Joseph Hodgson, Erringden Grange. Second, William Smith, Halifax.

SILVER PHEASANT CHICKEN.—First, Dan Leeming, Pellon. Second, Joseph Hodgson, Erringden Grange.

CHITTAPRATT HENS AND A COCK.—First, Dan Leeming, Pellon. Second, J. S. Rawson, Ivy Cottage.

CHITTAPRATT CHICKEN.—First, James Dixon, Bradford. Second, James E. Norris, Halifax. Commended.—Brook Wilkinson, Shelf.

DORKING HENS AND A COCK.—First and second, Rev. Geo. Hustler, Tadcaster. Commended.—Edward Akroyd, Denton Park.

DORKING CHICKEN.—First and second, Edward Akroyd, Denton Park. Commended.—Rev. George Hustler, Tadcaster. William Smith, Halifax.

MALAY CHICKEN.—First, James Dixon, Bradford.

SPANISH HENS AND A COCK.—First, James Uttley, Copley Gate. Second, Henry Richardson, Sowerby Bridge. Commended.—Henry Butterworth, Shelf.

SPANISH CHICKEN.—First and second, James Uttley, Copley Gate. Commended.—Thomas Walker, Shaw Hill.

GAME HENS AND A COCK.—First, William Smith, Halifax. Second, Dan Leeming, Pellon.

GAME CHICKEN.—First, William Smith, Halifax. Second, James Dixon, Bradford. Highly Commended.—Thomas Dodds, Ovenden. Commended.—James Thompson, Southowram.

BANTAM HENS AND A COCK.—First, J. S. Rawson, Ivy Cottage.

(Sebright Silver-laced.) Second, James Dixon, Bradford. Commended.—Joseph Hodgson, Errington Grange.

BANTAM CHICKEN.—First, James Dixon, Bradford. Second, J. S. Rawson, Ivy Cottage. (Sebright Silver-laced.)

COCHIN-CHINA HENS AND A COCK.—First, Rev. Geo. Hustler, Tadcaster. Second, Henry Butler, Shelf. (Partridge-feathered.) Commended.—Rev. Geo. Hustler, Tadcaster.

COCHIN-CHINA CHICKEN.—First, Rev. Geo. Hustler, Tadcaster. Second, Thomas Parkinson, Newstead. Commended.—Henry Butler, Shelf.

HENS AND A COCK OF ANY OTHER BREED.—First, William Smith, Halifax. (Brahma Pootra Chicken.) Second, James Dixon Bradford. (White Polands.) Commended.—Joseph Parkinson, Wheatley. (Andalusians.)

GOOSE AND GANDER.—First and second, Henry Ambler, Watkinson Hall.

GOSLINGS.—First and second, Henry Ambler, Watkinson Hall. Commended.—William Smith, Halifax.

AYLESBURY DUCKS AND DRAKE.—First, James Dixon, Bradford. Second, Henry Ambler, Watkinson Hall.

AYLESBURY DUCKLINGS.—First, Henry Ambler, Watkinson Hall. Second, Samuel Thompson, Park Nook.

ROUEN DUCKS AND DRAKE.—Second, James Dixon, Bradford.

ROUEN DUCKLINGS.—First, Edward Akroyd, Denton Park. Second, Henry Ambler, Watkinson Hall.

TURKEYS AND ADULT MALAYS.—No entries.

MANCHESTER AND LIVERPOOL AGRICULTURAL SOCIETY.

THE Exhibition of this Society took place on the 6th inst. We shall reserve our notes on the Poultry until next week. E. Hewett, Esq., of Sparkbrook, near Birmingham, was judge, and awarded the prizes as follows:—

SPECKLED OR GREY DORKINGS.—Prize, William Wright, West Bank, Widnes, near Warrington. Commended.—Joseph Hindson, Barton House, Breck-road, Liverpool.

SPANISH FOWLS.—Prize, Charles Jones, 51, Bridge-street, Birkenhead. Highly Commended.—Thomas Cook, Eccleston, near Prescott. Commended.—Elizabeth Cook, Eccleston, near Prescott. (An excellent Class.)

GAME FOWLS.—Prize, Henry Worrall, Knotty Ash House, near Liverpool.

COCHIN-CHINAS.—Prize, Thomas Burnett, Hutton, near Preston.

GOLDEN-PENCILLED HAMBURGS.—Prize, Robert Cheshyre Whiteaway, Runcorn.

SILVER-PENCILLED HAMBURGS.—Prize, Lady Eleanor Hopwood Knowsley Parsonage, near Prescott.

GOLDEN-SPANGLED HAMBURGS.—Prize, George Fell, Warrington.

SILVER-SPANGLED HAMBURGS.—Prize, Thomas Burnett, Hutton, near Preston.

POLANDS (Black with White Crests; Golden or Silver).—Prize, James F. Greenall, Grappenhall Hall, near Warrington.

ANY OTHER BREED, AND ALL OTHER BREEDS, OR CROSS-BREEDS.—Prize, Mrs. T. Townley Parker, Astley Hall, Chorley. (Fowls of the Dorking breed.)

GESE.—Prize, W. W. Hornby, Capt., R.N., Knowsley, near Prescott. (Pen of Geese of the white breed.)

AYLESBURY DUCKS.—Prize, Thomas Burnett, Hutton, near Preston.

ROUEN DUCKS.—Prize, Henry Worrall, Knotty Ash House, near Liverpool.

ANY OTHER BREED.—Prize, Henry Worrall, Knotty Ash House, near Liverpool. (Pen of Ducks of the Call breed.) Highly Commended.—Thomas Burnett, Hutton, near Preston. (Pen of Ducks of the East Indian breed.)

TURKEYS.—Prize, W. W. Hornby, Capt. R.N., Knowsley, near Prescott.

BEST FOUR GOSLINGS.—Prize, W. W. Hornby, Capt. R.N., Knowsley, near Prescott.

BEST FOUR DUCKLINGS.—Prize, Edward Lister, Cassia Lodge, near Northwich. (Pen of Ducklings of the Aylesbury breed.) Highly Commended.—Thomas Burnett, Hutton, near Preston. (Pen of Ducklings of the White Aylesbury breed.) Joseph Stubbs, Park Place, Frodsham. (Pen of Ducklings of the Rouen breed.) (A very meritorious class.)

BEST FOUR DORKING CHICKEN.—One Cockerel and three Pullets.—Prize, Thomas Roscoe, (cottager) Prescott Lodge, Prescott. Highly Commended.—Gilbert Greenall, M.P., Walton Hall, near Warrington. William Bradshaw, Slade House, Levenshulme, near Manchester. William Wright, West Bank, Widnes, near Warrington. Commended.—George Henderson, Orrell House, near Wigan. (The best class in the collection.)

BEST FOUR SPANISH CHICKEN.—One Cockerel and three Pullets.—Prize, Thomas Roscoe, (cottager) Prescott Lodge, Prescott. Highly Commended.—William Copple, (cottager) Knowsley, near Prescott. Commended.—William Copple, (cottager) Knowsley, near Prescott.

BEST FOUR COCHIN-CHINA CHICKEN.—One Cockerel and three Pullets.—Prize, William Copple, Eccleston, near Prescott. Commended.—Thomas Parr, Grappenhall Heyes, near Warrington.

BEST FOUR GOLDEN-PENCILLED HAMBURGH CHICKEN.—One Cockerel and three Pullets.—Prize, Robert Cheshyre Whiteaway, Runcorn. Highly Commended.—Robert Cheshyre Whiteaway, Runcorn.

BEST FOUR SILVER-PENCILLED HAMBURGH CHICKEN.—One Cockerel and three Pullets.—Prize, Lady Eleanor Hopwood, Knowsley Parsonage, near Prescott.

BEST FOUR SILVER-SPANGLED HAMBURGH CHICKEN.—One Cockerel and three Pullets.—Prize, George Fell, Warrington. Commended.—James F. Greenall, Grappenhall, near Warrington.

BEST FOUR POLAND CHICKEN (Black with White Crests; Golden or Silver).—One Cockerel and three Pullets.—Prize, George Lunt, Eccleston, near Prescott. Highly Commended.—George Fell, Warrington. (Pen of Fowls of the Silver-spangled Poland breed.)

BEST FOUR CHICKEN OF ANY OTHER BREED, OR CROSS-BREEDS.—One Cockerel and three Pullets.—Prize, Thomas Burnet, Hutton, near Preston. Commended.—Gilbert Greenall, M.P., Walton Hall, near Warrington.

LONDON MARKETS.—SEPTEMBER 10TH.

COVENT GARDEN.

THERE is still an abundant supply of all kinds of produce. *Plums* are very plentiful; and for the last seven years we do not remember so many *Green Gages* as there are now; they are very fine and well-ripened. The small ones fetch from 6s. to 10s. per sieve, while the large, well-ripened, make from 12s. to 18s. per punnet of a dozen or a dozen-and-a-half. The other sorts are the *Goliath*, the *Muscle*, and the *Orleans*—all very plentiful. *Pines* and *Grapes* are abundant; so also are *Apples* of all kinds, and the common sorts of *Pears*. *Kentish Filberts* are very plentiful, but scarcely sufficiently filled. Vegetables and Flowers are in great abundance.

FRUIT.

Apples, kitchen,	
per bushel	3s. to 4s.
„ dessert ..	4s. „ 6s.
Pears	4s. „ 8s.
Apricots, per doz.	9d. „ 2s.
Peaches, per doz.	3s. „ 8s.
Nectarines, doz.	3s. „ 8s.
Cherries, lb.	— „ —
Plums, per sieve	4s. „ 8s.
Pine-apples, lb.	3s. „ 6s.
Grapes, lb.	3s. „ 6s.
Melons, each	2s. „ 6s.
Figs	— „ —
Gooseberries, per	
quart	— „ —
Currants	— „ —
Raspberries	— „ —
Strawberries, per	
pottle	— „ —
Oranges, per 100	4s. „ 10s.
Lemons	6s. „ 8s.

VEGETABLES.

Cabbages, per doz.	9d. to 1s.
„ Red, per doz.	2s. „ 4s.
Cauliflowers, doz.	2s. „ 4s.
Brocoli	1s. „ 2s.
Savoy	— „ —
Greens, doz. bun.	2s. „ 3s.
Spinach, per sieve	1s. „ 2s.
Peas, per bush.	2s. „ 3s.
Beans	— „ —
French Beans,	
half sieve	1s. 6d. „ 2s. 6d.
Scarlet Runners	1s. 6d. to 3s.
Almonds, per lb.	2s. „ —

Nuts, Filberts, per.

100 lbs.	30s. to 40s.
„ Cobs, ditto	30s. „ 40s.
„ Barcelona,	
per bushel	20s. „ 22s.
„ Brazil, per	
bushel	12s. „ 14s.
Walnuts, per 1000	9s. „ 12s.
Chestnuts	— „ —
Carrots, bunch ..	4d. „ 6d.
Parsnips	— „ —
Beet, per doz.	1s. „ 1s. 6d.
Potatoes, per cwt.	3s. „ 6s.
Turnips, bunch ..	2d. „ 6d.
Onions, young, bun.	1d. „ 2d.
Leeks, per bunch	2d. „ 3d.
Garlic, per lb. ..	6d. „ 8d.
Shallots, per lb.	4d. „ 6d.
Horseradish, per	
bundle ..	1s. 6d. to 2s. 6d.
Lettuce, Cos, per	
score	6d. „ 1s.
„ Cabbage	6d. „ 8d.
Endive, per score	1s. „ 1s. 6d.
Celery, per bun.	8d. „ 1s.
Radishes, Turnip, per	
doz. bunches	1s. „ 1s. 6d.
Water Cresses, per	
doz. bunches ..	6d. „ 9d.
Small Salad, per	
punnet	2d. „ 3d.
Artichokes, each	.... 3d.
Asparagus, per	
bundle	1s. 6d. „ 4s.
Sea-kale, per pun.	— „ —
Rhubarb, per bdle.	2d. „ 6d.
Cucumbers, each	3d. „ 8d.

COVENT GARDEN—Continued.

Vegetable Marrow per doz. 6d. ,, 1s.	Marjoram, per bunch 6d. ,, 9d.
Tomatoes, pun. 1s. ,, 2s. 6d.	Fennel, per bunch 2d. ,, 3d.
Mushrooms, per pottle 8d. ,, 1s.	Savory, per bunch 2d. to 3d.
HERBS.	Thyme, per bunch 2d. ,, 3d.
Basil, per bunch 6d. to 9d.	Parsley, per bunch 2d. ,, 3d.
	Mint, per bunch 4d. ,, 6d.

GRAIN AND SEED.

WHEAT.	PEAS.
Kent and Essex, red, per qr. .. 71s. to 80s.	Boiling, per qr. 42s. to 47s.
Ditto, white.... 76s. ,, 86s.	Common 36s. ,, 38s.
Norfolk and Suf- folk 71s. ,, 74s.	Grey 37s. ,, 40s.
Dantzic 86s. ,, 92s.	Maple 40s. ,, 42s.
Rostock 81s. ,, 90s.	SEEDS.
Odessa..... 73s. ,, 76s.	Turnip, White, per bush. — to —
American..... 83s. ,, 85s.	Swede — " —
BARLEY.	Rape 84s. ,, 86s.
Malting 35s. to 38s.	Linseed, sowing 80s. ,, 83s.
Grinding and Distilling.... 30s. ,, 32s.	" crushing 70s. ,, 73s.
Chevalier..... 31s. ,, 34s.	Clover, English, red..... 60s. ,, 68s.
OATS.	" Foreign do. 52s. ,, 57s.
Scotch, feed .. 31s. to 32s.	" White 68s. ,, 73s.
English 25s. ,, 26s.	Trefoil 28s. ,, 32s.
Irish 24s. ,, 26s.	Rye 40s. ,, 43s.
Dutch Broo .. 27s. ,, 29s.	Tares — " —
Danish 25s. ,, 29s.	Canary 58s. ,, 60s.
Russian 26s. ,, 29s.	Hemp 50s. ,, 53s.
BEANS.	Linseed Cake, per ton £11 to £12 10s.
Harrow 41s. to 43s.	Rape Cape £6 10s. ,, £6 15s.
Pigeon 42s. ,, 48s.	Indian Corn .. 47s. ,, 50s.
Tick..... 40s. ,, 42s.	

HAY AND STRAW.

Clover, 1st cut per load 110s. to 147s.	Meadow Hay, new 95s. to 120s.
Clover, new .. 120s. ,, 135s.	Rowan — " —
Ditto, 2nd cut 90s. ,, 140s.	Straw, flail 30s. ,, 36s.
Meadow Hay .. 90s. ,, 135s.	Ditto, machine 28s. ,, 30s.

MEAT.

Beef, inferior, per 8 lbs. ... 3s. 4d. to 3s. 8d.	Mutton, mid. 3s. 10d. to 4s. 4d.
Do. mid. 3s. 10d. to 4s.	Do. prime 4s. 6d. to 4s. 10d.
Do. prime 4s. 2d. to 4s. 4d.	Veal 3s. 10d. to 4s. 10d.
Mutton, in- ferior.... 3s. 4d. to 3s. 8d.	Lamb 5s. 4d. to 5s. 10d.
	Pork, large 3s. 8d. to 4s. 0d.
	Ditto, small 4s. 0d. to 4s. 6d.

POULTRY.

Although, in consequence of the harvest, and the scarcity of hands for out-door occupations, the supply of poultry has been rather less this week, yet the small demand causes that there shall be little alteration in the prices.

Shooting has been so generally deferred for a week, that Partridges have been scarcer than is usual. From all the accounts we receive, the breed is very large, and the supply cannot fail to increase.

Large Fowls 4s. 6d. to 5s. each	Partridges 2s. to 2s. 6d. each
Smaller do. .. 3s. to 3s. 6d. ,,	Leverets 3s. 6d. to 4s. ,,
Chickens 2s. 3d. to 2s. 9d. ,,	Pigeons 8d. to 9d. ,,
Geese 6s. to 7s. ,,	Rabbits 1s. 5d. to 1s. 6d. ,,
Ducks 2s. 6d. to 3s. ,,	Wild do. 9d. to 10d. ,,
Grouse 2s. 6d. to 3s. ,,	

PROVISIONS.

BUTTER.—Cwt.	CHEESE.—Cwt.
Dorset, fine .. 104s. to 108s.	Cheshire, fine .. 74s. to 90s.
Do. middling .. 90s. ,, 96s.	Gloucestershire, double 70s. ,, 76s.
Fresh, per doz. lbs. 12s. ,, 13s.	Ditto, single.... 60s. ,, 74s.
Friesland 98s. ,, 100s.	Somerset 70s. ,, 76s.
Kiel 94s. ,, 98s.	Wilts, loaf 68s. ,, 78s.
Carlow 98s. ,, 102s.	Ditto, double .. 72s. ,, 78s.
Waterford 98s. ,, 102s.	Ditto, thin 64s. ,, 64s.
Cork 98s. ,, 102s.	Ditto, pines 72s. ,, —
Limerick 92s. ,, 96s.	Berkeley, thin .. 62s. ,, 66s.
Sligo — " —	
BACON.—Cwt.	HAMS.—Cwt.
Wiltshire, dried 80s. to 84s.	York, new 80s. to 90s.
Waterford 74s. ,, 76s.	Westmoreland.. 76s. ,, 86s.
	Irish..... 74s. ,, 84s.

WOOL.

Down Tegs 1s. 2d. to 1s. 3d.	Leicester, fleeces .. 1s. ,, 1s. 1½d.
Ditto Tegs and Ewes .. 1s. 1d. ,, 1s. 2d.	Long, heavy do. 1½d. ,, 1s.
Half-bred Hog- gets 1s. 3d. ,, 1s. 3½d.	Combining skins 10½d. ,, 1s. 1d.
Do. Wethers 1s. ,, 1s. 2d.	Flannel wool 1s. 1d. ,, 1s. 2½d.
Kent Fleeces 1s. 1d. ,, 1s. 2d.	Blanket wool .. 6d. ,, 1½d.

TO CORRESPONDENTS.

*** We request that no one will write to the departmental writers of THE COTTAGE GARDENER. It gives them unjustifiable trouble and expense. All communications should be addressed "To the Editor of The Cottage Gardener, 20, Paternoster Row, London."

THE "SIR HARRY" STRAWBERRY.—In consequence of an anonymous paragraph which appeared in *The Gardeners' Chronicle*, of 25th August last, signed "Fragaria," calling ironically for testimonials on the qualities of this Strawberry, Mr. Underhill, in answer, and also in justice to those parties who have had plants, begs to call the attention of our readers to the advertisement of testimonials in our advertising columns.

CORDAGE OF SUN-FLOWER STALKS.—T. B. W. will be obliged by information on the making of this.

ROCK-WORK (B. Vivian).—It is quite impossible to give directions for making such a structure. If you will consult THE COTTAGE GARDENERS' DICTIONARY you will find all that we can give as practical details. Then, again, as to the plants, they must vary accordingly as the Rockery is shaded or exposed to sunshine. If shaded, *Ferns* will suit it; if sunny, *Daphne cneorum*, *Genista triquetra* and *saxatilis*, *Juniperus nana* and *prostrata*, *Pernettya phyllææfolia* and *pilosa*, *Berberis empetrifolia* and *Darwinii*, *Arbutus uva-ursi*, *Cotoneaster marginata* and *microphylla*, *Iberis anthemum*, and all Rock Roses, or *Helianthemums*.

BLUE-BEARD VERBENA (J. G.).—We have never grown it, but we always find it necessary to make some abatement in artists' colouring. Thanks for all communications. We shall discontinue the advertisement you name.

DERIVATION OF NEMOPHILA (H. G. M.).—Your communication was printed at page 415, before your note reached us. It had been waiting its turn to appear, for it is quite impossible for all communications to be inserted at once. As the party you allude to happens to be a very humble clergyman, your conclusion you will feel was rash and erroneous. Had he been the highest dignity in the church, he would have had no influence over our award of what we consider is equitable.

DUNG-FLUE (A Subscriber from the First).—You will have seen that your query was answered at page 420.

BLANCHED TURNIP-TOPS (Idem).—All that is needed is to plant the bulbs, after cutting off the tops, in a perfectly dark place. In a warm greenhouse under Sea-kale pots will do. The bulbs emit shoots, which growing in the dark are colourless.

NAMES OF PLANTS (Margaretta). We think *Calceolaria scabiosæfolia*; an annual rarely cultivated. (A Distant Reader).—1. *Pteroma elegans*; for its culture buy our number 200, and look at its page 270. 2. *Erica Aitonii*. 3. *Escallonia rubra*. 4. *Bossia microphylla*. 5. *Cuphea strigulosa*. (Azile).—1. *Schizanthus pinnatus*. 2. *Platystemon californicus*. 3. *Linaria spartea*. 4. *Madia elegans*. (James Hilder).—*Asplenium ebenium*. (E. P.).—*Asplenium adiantum-nigrum*.

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WEEKLY CALENDAR.

D M	D W	SEPTEMBER 18—24, 1855.	WEATHER NEAR LONDON IN 1853.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in Inches.						
18	Tu	Sprawler Moth.	30.022—30.015	69—59	S.W.	05	40 a 5	8 a 6	8 46	7	5 46	261
19	W	EMBER WEEK.	29.990—29.936	72—58	S.W.	02	42	6	9 35	3	6 7	262
20	Th	Sun's declination, 1° 13' N.	30.006—29.890	71—41	N.	04	44	3	10 43	9	6 28	263
21	F	St. MATTHEW.	30.193—30.144	72—34	W.	—	45	1	morn.	10	6 49	264
22	S	Twin-spot Wainscot Moth.	30.314—30.255	63—44	N.W.	03	47	v	0 7	11	7 10	265
23	SUN	16 SUNDAY AFTER TRINITY.	30.218—30.197	63—55	W.	—	49	56	1 39	12	7 31	266
24	M	Large Ranunculus Moth.	30.093—30.058	70—36	W.	—	50	54	3 14	13	7 52	267

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 66.2°, and 45.6°, respectively. The greatest heat, 83°, occurred on the 19th, in 1844; and the lowest cold, 26°, on the 22nd, in 1846. During the period 105 days were fine, and on 91 rain fell.

THE FRUITS AND FRUIT-TREES OF GREAT BRITAIN.

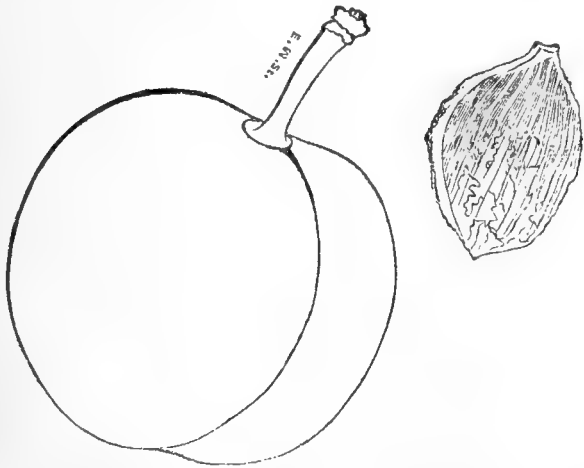
NO. V.

THE GREEN GAGE PLUM.

IDENTIFICATION.—Switz. Fr. Gard. 106. Aber. Fr. Gard. 242. Fors. Treat. 20. Hort. Soc. Cat. No. 57. Lind. Guide, 445. Down. Fr. Amer. 276.

SYNONYMES.—Green Gauge, *Hitt Treat.* 253. Great Green Damask, *Mill. Dict.* ed. 1. Verdoch, *Park. Par.* 576. Queen Claudia, *Mill. Dict.* ed. 1. Bruyon Green Gage, *Hort. Soc. Cat.* ed. 1. n. 28. Bruyn Gage, *Acc. Down. Fr. Amer.* Bradford Gage, *Ibid.* Isleworth Green Gage, *Acc. Hort. Soc. Cat.* Wilmott's Green Gage, *Ibid.* ed. 1. 275. Wilmott's New Green Gage, *Ibid.* Wilmott's Late Green Gage, *Ibid.* Dauphine, *Duh. Arb. Fruit.* ii. 89. Abricot vert, *Acc. Duhamel.* Verte Bonne, *Ibid.* Reine Claude, *Knoop Fruit.* 62. Mirabelle Vert double, *Ibid.* 58. Grosse Reine Claude, *Bret. Ecole.* ii. 499. Grosse Reine, *Hort. Soc. Cat.* ed. i. 124. Damas Vert, *Inst. Arb. Fruit.* 145. Sucrin Vert, *Acc. Hort. Soc. Cat.* Vert et Bonne, *Dubr. Cours.* Gross Damas verd, *Merlet Abrégé.* Trompe Valet, *Acc. Merlet.* Trompe Garçon, *Ibid.* Verdochy, *Markh. Eng. Husb.* 129. Dauphiness, or Great Queen Claude Plum, *West. Bot.* iv. 202. Claudia vera, *Wahre Claudie, Doch. Pfl.* 147. Aechte grosse Renklode, *Prunus Claudiana, Lieg. Pfl.* ii. 193. Italienische Pflaume, *Bechst. Forsth.* 467. Dophinien Pflaume, *Christ. Vollst.* 375. Grosse Königin Claudie, *Deutsch. Obstgärt.* ii. 288.

FIGURES.—Hook. Pom. Lond. t. 38. Dub. Arb. Fruit. ii. pl. xi. Kraft Pom. Aust. ii. t. 193. Mayer Pom. Franc. t. vii. f. 10.



THIS universally known and highly-esteemed fruit has been longer in this country than is generally supposed. It is said to have been introduced at the beginning of the last century by Lord Gage, who procured it from the nursery of the Chartreux at Paris; but having received it without a name, it was called by his gardener the *Green Gage*. In France, although it has many names, that by which it is best known is *Grosse Reine Claude*, to distinguish it from a smaller and much

inferior Plum called *Reine Claude petite*. The Green Gage is supposed to be a native of Greece, and to have been introduced at an early period into Italy, where it is called *Verdochia*. From Italy it passed into France, during the reign of Francis I., and was named in honour of his consort Queen Claude; but it does not appear to have been much known or extensively cultivated for a considerable period subsequent to this; for neither Champier, Olivier de Serres, Vautier, nor any of the early French writers on Husbandry and Gardening, seem to have been acquainted with it. Probably, about the same time that it was introduced into France, or shortly afterwards, it found its way into England, where it became more rapidly known, and the name under which it was received was not the new appellation which it obtained in France, but its original Italian name of *Verdochia*, from which we may infer that it was brought direct from Italy. It is mentioned by Parkinson, in 1629, under the name of *Verdoch*, and, from the way he speaks of it, seems to have been not at all rare, nor even new. It is also enumerated by Leonard Meager in the "list of fruit which I had of my very loving friend, Captain Gurle, dwelling at the Great Nursery between Spitalfields and Whitechappel," and is there called *Verdocha*. Even so late as the middle of the last century, after it had been re-introduced, and extensively grown under the name of Green Gage, it continued to bear its original title, and to be regarded as a distinct sort from the Green Gage. Hitt tries to describe the distinction; but as he tries also to show that the Reine Claude is also distinct from the Green Gage, his authority cannot be taken for more than it is worth; a remark which may safely be applied to all the pomologists of the last century. Miller also laboured under the same hallucination as Hitt, for in his Dictionary he says, speaking of the Grosse Reine Claude, "this plum is confounded by most people in England by the name of Green Gage."

We have seen, therefore, that the generally-received opinion that this valuable plum was first introduced to this country by the Gage family is incorrect, but that it must have existed for considerably upwards of a century, at least, before the period which is generally given as the date of its introduction.

The fruit of the Green Gage, when well grown, is of medium size, an inch and a-half wide, and an inch and three-eighths long. The form is roundish, flattened

at the extremities, and indented at the apex, with a distinct shallow suture on one side, which extends from the stalk cavity to the apex. The skin is thin and transparent, exposing the fibrous texture of the flesh to which it adheres; the colour is yellowish-green, with, when much exposed to the rays of the sun, a light crimson cheek, and covered with numerous crimson specks and lines of russet; the whole surface is covered with ashy-grey bloom. The stalk is from half-an-inch to three-quarters-of-an-inch long, stout, and inserted in a small cavity. The flesh separates freely from the stone; is greenish-yellow, transparent, delicate, melting and juicy, with a rich, sugary, and most delicious flavour. It ripens in the middle and end of August.

The young shoots of the tree are smooth. The tree is a vigorous and healthy grower, hardy, and an excellent bearer. It may be grown as a standard, dwarf, espalier, or trained against a wall; but the richest flavoured fruit is always obtained from trees growing in the open ground, though not so large as those from a wall. In the north of England, and in Scotland, except in very favourable situations, it requires a wall to bring it to perfection. When there is a very abundant crop the tree should be gone over about the month of June, and the fruit thinned, otherwise, if the whole is allowed to ripen, the fruit will be small and inferior in flavour, wanting that peculiar richness which characterises this excellent plum. Thomas Andrew Knight was of opinion that the fruit was much improved by working the Green Gage on the Apricot; but we have no experience of the process. It is one of those varieties which may be reproduced from the stone, and hence we have so many new seedlings, so called, which do not essentially differ from their parent.

WE come next to the plant mentioned as *CALAMUS* in our translation of the Bible. In the Hebrew original it is called *Kanah Bosem*. That our translators were not consistent in their rendering of this name, is proved by their translating it sometimes "sweet Cane," as appears in *Isaiah* xliii. 24, and in *Jeremiah* vi. 20. We shall obtain some clue to the plant intended by the Hebrew original, if we examine, in the first place, what particulars concerning it are stated in the Bible.

It is certain that in its dried state it was highly fragrant,—for it is one of the first three of the scented ingredients to be mixed with oil, to form "an oil of holy ointment," for anointing the holy places and the priests. This is the recipe:—"The Lord spake unto Moses, saying, Take thou unto thee principal spices, of pure myrrh 500 shekels, and of sweet cinnamon half so much, even 250 shekels, and of *Kanah Bosem* 250 shekels; and of Cassia 500 shekels, after the shekel of the sanctuary, and of oil olive an hin: and thou shalt make it an oil of holy ointment, an ointment compound after the art of the apothecary." (*Exodus* xxx. 23—25.) This is certainly the first medicinal ointment on record, and will throw some light upon the subject of our inquiry.

That it was highly fragrant is evident, not only from the above passage, but from the following enumeration of some of the products of the imaginary garden in the Song of Solomon;—"Spikenard and Saffron, *Kanah Bosem* and Cinnamon, with all trees of frankincense; myrrh and aloes, with all the chief spices." (*Canticles* iv. 14.) More light is thrown upon the object of our enquiry by its being so continually mentioned in connection with cinnamon.

That the plant was not a native of Palestine is proved by more than one passage in Holy Writ, for in the 20th verse of the sixth chapter of *Jeremiah*, where God rejects the worship which was unaccompanied by obedience, he indignantly inquires, "To what purpose cometh to me incense from Sheba, and *Kanah Bosem* from a far country?"

We not only are thus informed that it was an importation from some distant land, but from another of the prophetic books we learn the very part to which it was brought. That port was Tyre, and in the 27th chapter of *Ezekiel*, where the doom of that "merchant of the people for many isles" is proclaimed, is a long enumeration of the places to which its commerce extended, and the produce derived from them. Among these occurs the following:—"Dan also and Javan, going to and fro occupied in thy fairs: bright iron, Cassia (a species of cinnamon), and *Kanah Bosem* were in thy market."

Now, there is no doubt that the words *Javan Meuzal*, which our translators have rendered "Javan, going to and fro," means "Javan of Uzal," a city of Arabia, inhabited by the descendants of Javan. That our translators had some doubt upon this point is shewn by their putting *Meuzal* in the margin. If we refer to the 10th chapter of *Genesis*, we shall find in the 27th and following verses that *Uzal* is mentioned in connection with Sheba, Ophir, Havilah, and other towns, all known as situated in Arabia. It was through Arabia that the caravans travelled which brought to Joppa, Tyre, and other places of that region the precious productions of India. It is quite certain, that during the same age the Phœnicians traded with India through the Persian gulf; but this passage in *Ezekiel* is the first *historical* record we have of the transmission through Arabia of the products of India.

We have now derived from the Scriptures all the information they afford relative to the *Kanah Bosem*, and it amounts to this:—It was a fragrant part of a plant, which imparted its odour to oil; it came with Cassia, or Cinnamon, a product of India; and, finally, from the first word of its name, *Kanah*, we ascertain that the plant was of the nature of the reed or cane, and we may observe, in passing, that the word *cane* is derived from the Hebrew term we are now considering.

Our next point for inquiry is, what plant of Hindostan is known to us that agrees with all the foregoing particulars? We have no difficulty in saying, that we think that it is the reed-like grass which produces the highly-fragrant *Roosa*, *Rahusa*, or *Rusa* oil, for it is spelt in all these ways by Europeans. This oil is produced by the *Andropogon toorancurha*, and it is thus

spoken of by Mr. Alexander Duncan, at one time the Assistant-Surgeon and Medical Storekeeper at Nee-much. "This grass is well known as furnishing a highly fragrant and stimulating oil. It occurs abundantly in the districts of Meywar and Malwa. I know few remedies more useful in the treatment of Rheumatism; local pains, &c. After the rains have ceased, and the grass begins to dry, the oil appears to exist in the greatest abundance, and the air is perfumed to some extent by its odour; and which, though peculiar, is in my opinion not unlike that of the Oil of Carraway."—(*Journal of Calcutta Medical Society*, i., 509.)

Dr. Royle also thinks that the *Kanah Bosem* was afforded by this species of *Andropogon*, but he calls it *A. Iwarancusa*, and thinks that another species, which he calls *A. calamus aromaticus*, is productive of similar oil. (*Essay on the Antiquity of Hindoo Medicine*, pp. 33, 82.)

"It covers the extensive arid plains of Central India, a country interspersed with large and numerous lakes, and therefore resembling that described by Theophrastus as the country in which the sweet calamus grows. The present plant was first figured in the Philosophical Transactions for 1790, from a dried specimen sent to Sir Gilbert Blane, by his brother at Lucknow. It is there accompanied by such information as Sir Gilbert had obtained from his brother, who, in his letter, states the occasion on which it was brought under his notice. In December, 1786, when on a hunting excursion with the Nabob Vizier, towards the Northern mountains, he was one day surprised by perceiving the air perfumed with an aromatic odour, and upon asking the cause, he was told it proceeded from the grass trodden and bruised by the feet of the elephants and horses of the Nabob's retinue. This induced Mr. Blane to collect some of the roots and plant them in his garden at Lucknow, where they thrived, and, in the rainy season, shot up spikes six feet in height, one of which was the specimen sent by him to his brother.

"Mr. Hatchett, F.R.S., has lately issued a paper ('On the Spikenard of the Ancients') describing the precious oil, obtained, as he considered, from this plant *Andropogon Iwarancusa*, but more probably from its neighbour, the *A. calamus aromaticus* of Royle, and which he follows Sir Gilbert Blane in referring to the spikenard, rather than the sweet Calamus of the ancients. This account is interesting for its notice of the products for which 'the sweet cane of a far country' was so famed in ancient times. The information he supplies was obtained from Mr. Swinton, who, when at Malwah, was attacked by severe rheumatism, and, after much suffering, found relief by employing, at the suggestion of some of the principal natives, as an embrocation, a precious oil, called by them *Rhonsee ke Teel* (oil of grass'). This proved to be the product of the plant in question. The oil is so highly fragrant that insects will not approach it; and the odour of the plant itself is so powerful, that although camels will eat almost any vegetable, yet they will not browse on this.

"The oil is obtained from the spikes, which, when ripe, are cut, with a portion of the stem, about one foot in length, and are then subjected to distillation. Mr. Swinton was informed that the oil has been prepared by the natives, in and about Malwah, from time immemorial, at first, probably, by the Parsees; although, at present, it is entirely in the hands of the Borahs, a very commercial sect, whose chief resides at Surat. Only a small quantity of this precious oil is consumed by the natives, the greater part being now, as was the case in very remote times (according to tradition), sent as an article of commerce to Arabia.

"The gathering is in the month of October, when the seeds forming the ears or spikes are become fully ripe. At that season, however, the jungle fever is so prevalent in the places where this plant is produced, that the peasantry who collect it will not expose their health and lives to very imminent danger, unless tempted by very high remuneration: this, and not the scarcity of the plant, appears to be the cause of the

high price which the oil bears, and which, consequently, precludes it from being used by any excepting the superior class of natives."

THE September Meeting of the Entomological Society, held on the 3rd instant, with the President, J. Curtis, Esq., F.L.S., in the chair, was one of the smallest we have seen for a long time past, many of the members being absent from London. A goodly display of new works was, however, announced, as having been received, since the last meeting, from the Royal Society, the Society of Arts, the Entomological Society of Stettin, Messieurs Chevrolat, Guérin-Méneville and Jekel, of Paris, Mr. F. Walker, &c.

A case of rare Moths, new to the Society's collection, was also presented by Mr. Bond.

Mr. Lubbock exhibited a number of Galls of different kinds growing upon Oaks in Kent; a number of species of *Staphylinæ* (rove beetles); and also the rare *Lamia textor* and *Apamea conigera*, taken in Scotland, were exhibited by Mr. Foxcroft.

Mr. Douglas exhibited several rare and interesting minute Lepidoptera, including a new *Elachista*, reared from the larvæ, which form mining galleries in the leaves of *Chenopodium vulgare*, *Lithocolletes comparella*, reared from the leaves of Poplars since the last meeting; thus proving that the species of this genus are double-brooded in the course of a year, the first brood having appeared in April. Also *Gelechia maculiferella*, a very rare species, which he had taken on the windows of his own house, at Lee, in Kent.

Mr. Waring exhibited some remarkable varieties of the following species of Geometridæ, namely, *Boazmia repandaria*, *Tephrosia crepuscularia*, and *Anticlea rubidaria*, with the fasciæ of the wings confluent, and which might easily be regarded as a distinct species. All these curious specimens had been taken near Coomb Hurst, Croydon.

Mr. Westwood gave a notice of several entomological works recently published by Dr. Burmeister. 1. Upon the veins of the wings of the Coleoptera, as affording a valuable character for determining the distribution and affinities of the different families. 2. A monograph on the species of *Mutillæ* inhabiting Brazil, the author having taken a number of new species during his travels in South America; and, 3rd., A review of the great work of Madame Merian, on the Natural History of the insects and other objects of nature found by her in Surinam, with an identification of nomenclature of the species of insects.

Mr. Westwood also stated, that whilst recently collecting mineral Crustacea on the sea coast at Mount Edgecombe, he had observed a minute, opaque, white-winged Dipterous insect, which he had no doubt was identical with Mr. Halliday's newly-described Irish *Clunio marinus*. He also gave some account of the Museum of the Natural History Society of Plymouth, which contains portions of Dr. Leach's original collection.

Mr. Winter exhibited the rare *Nonagria musculosa* (*Nervosa*. Haer.), taken near Brighton.

Messrs. Curtis and Halliday gave an account of a recent tour in Belgium and Western Germany. At Liege they had visited M. Lacordaire, the author of a very valuable work on the Genera of Coleoptera now in progress, the third volume of which is in the press; as well as Mr. Candèze, who is occupied on a monograph on the extensive and difficult family of the *Elateridæ*. At Aix la Chapelle they had seen the remarkable collection of M. Foerster, which is very rich in minute *Hymenoptera*; and at Crefeld they had visited M. Von Bruck, who possesses a very extensive collection of *Coleoptera*; and M. Winnertz, whose memoirs on the minute *Diptera* have materially facilitated the classification of those difficult tribes, and who has invented a very simple microscopic camera obscura (described in the *Stettin Entomologische Zeitung*) whereby he is enabled to delineate the wings, &c., with great facility.

A conversation ensued on the various kinds of cameras used for delineating microscopical objects.

MIXED FLOWER BORDERS.

I HAVE received a string of inquiries from "Clericus," as to the best plan of planting mixed flower borders, and I hasten to explain my views. "Clericus" wishes to plant beds about six feet or so in width; and also some plans for planting borders, say, four feet in width. "Clericus" should have stated the character, or figure, of his beds, for on the figure the planting much depends. As to borders, they are alike in form everywhere, or very similar. In truth, the planting of beds is an affair about which the world differs exceedingly. "Clericus" says, "I have a few beds and boxes, and I have a border leading to my kitchen-garden, which I wish to have as gay as I can, and without any very great expense. I should like to know how many rows of flowers Mr. Errington would plant in such a border; what distance between the plants; and how to plant it so as to have it gay in spring, summer, and autumn? We have successional crops in the farm, why not in the garden?" Now I conceive, that in planning all this, several things must be taken into consideration. Form, or general outline, is a material consideration; at least, so I hold it. Colour is most important, also, as well as a due succession of flowers without blanks.

To name all the plants at present in our gardens eligible for such a purpose would be to occupy a whole COTTAGE GARDENER. I can, therefore, only suggest a few of the inexpensive kinds in order to meet the views of "Clericus."

In looking over our stock-in-trade as to such borders, we must endeavour to group, or classify them, or we shall be groping in the dark.

"Spring flowers." Here, who can do without *bulbs*? but bulbs have a blank in the middle of summer. *Annuals*, too; who cares to do without them? Then we may point to our best old *Herbaceous plants*. I should be sorry to see a mixed border without these; but objects multiply as I proceed. *Tree Roses* I hold to be a most important adjunct of the mixed border, although I once thought them thrown away in such a position. *Hollyhocks*; who would not have a good, bouncing, jolly sprinkling of *Hollyhocks*? Not myself. Again, plants of exotic character, or *half-hardy plants*, are certainly indispensable. Then we come to our popular families of plants, adapted for either in-doors or out-doors; their name is legion. We will point to a few: *Auricula*, *Polyanthus*, *Carnation*, *Antirrhinum*, *Pansy*, *Daisy*, *Lily*, *Verbena*, *Calceolaria*, *Cineraria*, *Pink*, *Fuchsia*,

Geranium, *Petunia*, &c. &c. Here, it will be admitted, is a goodly list; and how will "Clericus" select from it, in order to make a very economic border?

A reference to our extensive trade catalogues, with glowing descriptions of things, new and old, will make the mouth to water of hundreds besides "Clericus."

But, supposing that he merely needs such a border as can be got together without rummaging the trade catalogues, I will proceed to point to a few decent old-fashioned things, which are qualified to carry out such views in a more moderate way. "How many rows in a five feet border?" Flowers crammed in such a border never look well. We rather hold for good and well-disposed individual specimens, or groups, than a crowded assemblage of small affairs, ill-developed. Four rows, then, is the number for a five-feet border. In the outer row, I should place the dwarfed Annuals, Bulbs, with half-hardy things, *Mignonette*, and such like. In the second row, adjoining it, the *Tree Roses*, at about eight feet apart; and between those, a second height of flowers of tolerably bold character. In the third row, what I call filling up materials, such as masses of *Antirrhinums*; strong bushes of any strong exotic in character, such as *Fuchsias*, *Geraniums*, *Calceolarias*, *Cinerarias*, &c.; with here and there a very choice herbaceous plant of good character, such as our little *Phloxes*; and in the back row, a good cluster of *Hollyhocks*, just intermediate between the *Tree Roses*, in the second row, and, of course, eight feet apart; and between that, some of the more majestic of the herbaceous tribes, such as selections from the families *Aster*, *Delphinium*, *Veronica*, and others of tolerably bold development, ranging from three to five feet in height.

But one question arises here—How to manage with the spring bulbs, so as not to be damaged by the blanks they create, in the naturally premature decay of their foliage; the latter of which must be tolerated, if a good bloom be expected in the ensuing spring. This is not so difficult an affair as some think. We can get over it tolerably well. *Annuals* are the best qualified to cover the delinquents, and we seek the low or prostrate kinds, such as the *Nemophila*, *Kaulfussia*, *Calandrinia*, *Saponaria calabrica*, *Mignonette*, *Musk*, or any such things. By sowing the seed of such early, say the third week in March, and attending them carefully against slugs, storms, &c., they may be had in full blossom by the time the foliage of the bulbs fades, and so fully invest the spot, that nobody, henceforth, cares a button about the bulbs until the ensuing spring.

But I deem it expedient to slightly enrich the soil about the bulbs before sowing the annuals, and this is beneficial to the bulbs afterwards. A circle is drawn round the bulb-patch, two or three inches in depth; this is filled with some powerful old soil, such as the old loam and dung mixed from the top of a last year's Cucumber-bed, and such being pressed tight, the seed is sown in this circle.

As for "mixed beds," about which "Clericus" desires information; I presume that they would have to be composed of very similar materials to those quoted. But, as before observed, so much depends on the size of the bed. One thing I would name, or rather suggest, that proportion be taken into consideration—that great element of the beautiful, although not so as to the picturesque. No bed, in my opinion, or border, would look well, with the high plants at the edge, and the low ones in the centre; neither would any bed or border look well with a deal of height and massiveness at one end, and light, or low and straggling forms at the other. We must have a sort of balancing both as to height, and colouring, and massiveness in form. I have seen beds look handsome, although what might be termed very short of colouring.

R. ERRINGTON.

APPROPRIATE EMPLOYMENT.—We want employments that shall give room and verge enough for the development of individual character. Why need we all run in certain beaten tracks? Why must a young man be counted respectable only as he follows certain specified professions? Why need he be lawyer, priest, medical man, clerk, or gentleman farmer, because his father has an income of ten thousand a-year? Why is he counted the black sheep of a rich man's family, who could do nothing for his living that his decent friends would have him, but insisted on putting on a blouse and entering a machine-shop among the lowest hands, in order to learn the detail of the business? Why did his cousin Caroline refuse to bow to him in Broadway? The result of all this is, that our young men have nearly lost their manhood, and for the most part have their lives marked out for them, instead of making them the result of individual character. A man of great genius cannot be so restrained, we know; but every man should rebel against these tyrannies of society, and declare that whether his work be hod-carrying or the writing of Iliads, no hand shall restrain him from doing what he was born to do, and being happy in his work. There is scarce a boy who, if he were allowed to follow his impulses in the choice of an occupation, but would do something praiseworthy. The very fact that we have made the number of professions in which a gentleman may engage so small, has made the remaining occupations in which men are employed not respectable. We look into the kitchens of Pompeii, and wonder to see pans and skillets, whose shape and ornament make them fit for the tables of the gods; we can find no such kitchen utensils in use now. But we forget that it is no longer possible for a "gentleman" to be a tinman or a brazier. He may learn to read inscriptions on Greek vases, but he must not soil his hands with potter's clay.

The need of such employments as we have alluded to is chiefly felt, perhaps, by women, who, in many cases, have to live by the work of their own hands, and who have few sorts of business open to them, while even in these they receive less pay than men. To do what we will is often difficult, sometimes impossible, but not nearly so often impossible as is thought; yet it must be that there are undeveloped resources of the kind we have mentioned waiting for some one to turn them to account, and which a mind bent to the search could not fail before long to discover.

We know a woman living near the sea, who supports herself comfortably by gathering the beautiful sea-weeds thrown upon the beaches, and arranging them neatly in books; we know of another, who makes a very elegant sort of paper lantern, the prettiest thing in the world for carrying about the house, and for which the demand must be great enough to take up all her time; another collects the autumn leaves of our woods and preserves them in books or portfolios; another procures vases of graceful shape from the nearest potter, and decorates them with elegant patterns in colour, of her own design. There is a man in Massachusetts who paints flowers most exquisitely on articles of furniture; and we know another in this State who has earned no slight reputation in making models of every sort of fruit and vegetable, his model giving the exact weight, size, colour, and appearance of the object, so that his cabinet, the result of only a few seasons' labour, is become a most valuable collection; yet he is a man of property, and began this work merely as an amusement.

These are only a few examples; but we doubt not that many more might be supplied of equal value. They may seem trifling instances, but the subject is not confined to such narrow limits. Every handicraft, every trade, can be made a Fine Art—ought to be made so; and until it is, to labour in it will be a curse and no blessing. I know of a tea-merchant, who thought so

well of his business that he had one of our best sculptors make him a statue of a Chinese boy to ornament his shop, and when you went there to buy tea, you felt that you were going upon no mean errand, and to a garden rather than a market. You heard there all that you would know of tea and China; the details of the business became song and picture, and the very muse of trade seemed to stand behind the counter.

Every occupation ought to spring from an individual character, and represent it. Instead of taking what is given us, we should work only in that field to which we are drawn. And only when we resolve to do so, shall we find that there is a field for every man to work in where he of right belongs, and where alone he can be happy in working. These occupations of which we have been speaking are the lesser of the Fine Arts, it is true; but nothing can come of their culture but grace and goodness and peaceful hours. As such we commend them to our readers.—*New York Independent.*

AUTUMN SEEDS AND SEEDLINGS.

THE gardener feels the change of the seasons sooner than the farmer, or any one else besides, and the change of this particular season of the year is more manifest to him than that of spring, or summer, or winter; the glass may be high, night and day, the days may be bright and balmy, yet every week in the autumn makes his seeds and cuttings more lazy to move, or root, or grow up or down. That degree of heat which in the spring brings everything to life, has little effect now to keep life a-going, and it is hard to say whether fine harvest weather or blustering winds and rains are better for seeds and seedlings which are sown and reared at this season. About cuttings, there is no difficulty about knowing that the finer the weather the better for them. We seldom have had a better season for cuttings of all bedding-plants than the present, and those who put them in in the open ground never had a better strike, as far as I can see and hear; but the surface of the ground has been so long hot and dry after the autumnal seeds were sown, that many of them will not see daylight till the winter is over.

I have ripened several kinds of seeds this summer, and sowed some of each six weeks ago, but I have very few seedlings to show for my pains; and if I had purchased the seeds from any of the great seed-houses, it is as likely as not that I should have some misgivings about the age and soundness of the samples. Now, after seeing so many seed-times and harvest-times, if such thoughts could find a vent from such a head as mine ought to be, how will the question stand with the gay and giddy heads? Yea, with the sober and common-sense heads of little experience in the matter? Why, each and all of them will blame the seedsman in such a season as this; but let us have fair play on both sides. No one is harder, on blameable points, either in or out-of-doors, in the nursery, than your humble servant; but if you bought twelve or twenty packets of seeds upon my late recommendations, and now find how few of them have come up, be reconciled by my tale, for you are not alone in your disappointment, and better seeds than mine were never weighed; still, I am very short of plants; but I have no fear, however, about every seed coming up some day or other, and I shall treat the seed-beds under that belief till the end of February. If I had known that we were to have such splendid harvest weather all through, I should have advised the seed-beds to be daily watered until the seeds were all up; and yet that is a dangerous practice so early in the autumn; for the moment you get a seed into leaf by forced waterings, you must water it till the first rain, however long that may be; whereas, seedlings

which come up from dews, rains, or natural moisture in the earth, never want watering at this season, or very seldom indeed.

There is another point against seedlings which have been forced to come by artificial watering; their being thus fed, as well as forced by hand, they are more delicate, and therefore less able to stand the frost, than such as have sprouted more naturally, and came on under less excitement. The practical value of knowing all this at the present moment is this:—If a good fall of rain does not come before this is published, let all seed-beds and rows have a good watering or two, and let not the surface get quite dry again till October is out, and all the flower-seeds which will vegetate this autumn will be up and sure by that time. In places where self-sown seeds never do well from the effects of the winter, I would not water them on any account, let the soil be ever so dry, till Christmas: the drier the better, and the fewer seeds that vegetate before the New Year, the better also, as then they will not vegetate much till they are out of harm's way. Last year, by a constant excitement, I made the seeds of *Dielytra spectabilis* vegetate out of season, just before the snow came on, and the packet of seeds of it which I received last July was sown at once, and the pit was watered for a month, and was kept in a warm place during the trial; but, seeing no likelihood of the seeds vegetating this autumn, I put the pot down to the rim in the open border, with a good opening under it for draining off the water; and to save it from all accidents, I put a pot over it upside down, with its rim firmly fixed in the ground, so that no rat or mouse, or grub or caterpillar, can get to the seeds; this, therefore, is the safest plan to adopt with all hardy seeds which lie dormant during the winter, and which are known to require a long time to lie in the ground before the time for sprouting. Suppose you were to try some Rose seeds of your own saving; it is best to have them in the earth as soon as they are gathered, and better to be in a pot, or a seed-pan plunged, than in the open border, because a bed or border might become unfit for them, from remaining so long unstirred. It is easy to forget such seeds, too; and some one might dig or hoe the place just as the seeds were on the move below the surface; but when it is carefully sown in a pot, or pan, and is covered over, like my *Dielytra* seeds, it escapes all accidents, and the pot, or pots, may be removed from one place to another, if any digging or alterations are to be done where they are plunged. The natural dampness of the soil will be sufficient moisture for them till the seedlings appear above ground.

Suppose, again, that one wanted seedlings of Portugal Laurels, or of the common Laurel, to make standard plants of, we know the seeds would not do if they were kept dry till the spring; that is, if they did grow it would not be before that time twelve-months; and we know the hazard of sowing them at once in a piece of open ground, as they do in the nurseries with pecks and bushels of seeds; for all that a private amateur would venture on could be put into a couple of good sized pots, till the seedlings were two or three inches long, when they might be shaken out of the ball, and be planted in a row anywhere near at hand, where they would be under the eye of the owner and not likely to be forgotten. Then, if proper care were taken of such plants from the beginning, and no shoot, except the leader, was allowed to grow more than six inches without being stopped, such plants, in time, would make the finest standard Laurels in the world; but a long time must intervene before they are high enough for an avenue; and, therefore, are proper subjects for children's experiments. Let a boy or a girl gather a few handfuls of the berries, say of the Portugal Laurel, when they are quite black, then sow them with his own or her own hands in a pot or two, have them plunged to the rim in a damp, shady

border, as I say, and put bigger pots over each of them to keep all harm from them, till the seedlings begin to appear above ground, then to remove the empty pots; afterwards to transplant, to prune, and take all manner of pains to get a free growth out of them for the first few years,—depend upon it, when the boy is a man, or when the sister is married, she would prize a half-dozen of such standards as much as a wedding-dress. Just think of her Majesty planting such and such trees, where she has been, to be a memorial of the visit in times to come;—why, that is as feathers compared to the weighty matters here set forth. After this, therefore, whenever you read in the "Dictionary," that such and such seeds do not come up till the second year, just think of how easily they might be made to grow by this plan in a few months; and though you might never want to try the plan yourself, it is well to know it, that you may tell it to some friends who may be right hot on the subject.

AUTUMN CUTTINGS.

Some Pelargonium cuttings, which I put in the open ground at the end of last July, when the ground was as hot as English ground ever was in our times, had put forth a few small roots by the end of the eighth day after they were put in. A row of cuttings of *Flower of the Day*, which were put in the day after the St. Swithin rain had ceased, made very creditable roots in twenty days: so that this Pelargonium is not at all so bad to strike as many people believe; but the whole secret is in putting in the cuttings during the first ten or twelve days of August. I put in some of them every ten days since, on purpose to see the difference, and I cannot help wondering how some people can put off their strike of this, and a few more of the like constitution, till it is too late to work them without some slight additional heat. I hold it as a firm principle, that no Pelargonium which is liable to take hurt from a long winter, as this one is known to be, should ever be propagated in heat in the autumn, but only in the open border, and the hottest border about the place; the border in front of the greenhouse is as good as any; but a Peach border, or a Vine border, would do.

I have tried another experiment, this last August, with cuttings of this very plant, the *Flower of the Day*. I put in a row of cuttings of it across a four-feet bed, and about four feet from a south wall; the cuttings were as close together as they could stand; the soil of the bed was so dry and powdery, at the time, that I could hardly make the cuttings sufficiently firm to stand against the wind; also, there were six of the cuttings not longer than a quarter-of-an-inch, being merely bottom buds, just started; and, would you believe it, they had not had a single drop of water at the time, nor for fourteen days after. The sun played hard upon them meantime, but they never flinched in the smallest degree; even the little bud-cuttings stood it like the rest of them. I may as well, however, tell, that a lady, who took more pity on them than I thought necessary, put in a row of boughs, six inches high, in front of them, which broke the rays considerably. There were two things meant to be proved by this experiment, and one thing which must be clear to every one who takes a thought on the subject;—the one thing was, the placing the cuttings across the line of the sun, so to speak, which gave every one of them an equal chance to harden, from not being in the shade of one another, or in the shade of anything else. This hardening, or ripening is, of all others, the most advantageous condition for an autumn cutting; it prepares the youngest slip, so as to make it able to endure as much hardship, in winter, as an old plant. Just give it a single thought, and you will see the advantage as plain as we did by this experiment. You ought, also, to resolve in your own mind, as we did on that occasion, never to allow

yourself, nor the gardener, to put bedding Geranium cuttings in pots in the autumn, or under glasses, or in a shaded place, or to be planted close together, even on a south border, because the more air and the more light and sun can reach them, the harder will their soft stems get the meanwhile, and the more hard now the less hardship will they suffer by-and-by. The two things which were to be proved were, whether soft cuttings like these could stand so much sun without scorching; they did stand it all; and whether, if they did, they would not root so freely as others of the same kind near them which were watered; that is, they did not root in fourteen days in the middle of August; but others, which were watered, rooted in that time; therefore, although it may be good policy not to water very soft Geranium cuttings for a few days after they are put in, it is better to water them after that period, till they make roots; but, after rooting, no more water should be given than will just keep them going, as, if much water is given, or a wet season follows, the hardening or ripening of the cuttings will not be properly done.

VERBENA AND PETUNIA CUTTINGS.

If you have not the proper conveniences for striking off as many Verbenas as you require in the autumn, the next best plan of all is to make so many layers from each kind, and keep them to strike cuttings from in the spring; but I would advise to put in *free shoots* for layers so late as this; not but that they might root and be strong enough before the end of October, but that you can now get abundance of shoots that are *not free*; that is, shoots which have already made some roots at the last joint which touched the earth; if these roots are not longer than the depth of your pots, use them by all means, and put in the roots as if you were potting off rooted cuttings. Old Verbenas never, or very seldom, answer to be potted from the open ground.

Petunias cannot be layered to any good purpose, and old plants of them are bad to lift; but I have often taken up a favourite Petunia about this time of the season, and after potting, and ten days' shade in a cool, damp place, out-of-doors, would be out of danger; then, by cutting back the shoots, not at once, but at three different times before November, I have kept them in small compass, and when in good condition such plants furnish early and excellent cuttings in the spring.

D. BEATON.

EXTRAORDINARY NUT-TREE.—The largest Nut-tree we have ever seen is growing in a cottage garden in Church Path, Beddington, near Croydon, in Surrey, occupied by Ann Payne. The trunk, for it is a perfect tree, is five feet high before it begins to branch. At the surface of the ground it is four feet three inches in circumference, and at four feet from the ground it is two feet eight inches. At a foot above the ground a large swelling has been formed, such as is frequently seen on the Elm, and this is four feet ten inches round. From the top of the trunk four large arms are produced, the largest of which is two feet two inches round, and the smallest one foot seven inches; and the girth of the trunk, at the point where these four arms are produced, is exactly four feet. The tree has been very much larger than it is at present, two large limbs having been removed apparently some years ago; and the head has been more than once reduced, which gives it somewhat of a Pollard appearance, but even now it is from twenty-four to twenty-five feet high. This season it is bearing a plentiful crop, and, from what we saw, we have no doubt it is a fine and rare specimen of the *Cob Nut*. It is to be regretted, however, that decay has begun upon the trunk, and unless its progress is arrested by plas-

tering it over, there is reason to fear that this fine specimen will, ere long, become disfigured.

HINTS IN CELERY CULTURE.

(Continued from page 425.)

GENERAL CULTURE.—With such trenches so little sunk, if there is not a retentive bottom, the plants can scarcely be over-watered in dry weather, though, of course, it is no use giving more than the plants can fully imbibe. When growing freely they will suck in weak manure-water with avidity. A little quick-lime should often be put into the water, which will settle worms, and keep slugs, &c., at a distance. If the garden is at all subject to the Celery-fly, or grub, a little soot, either dry, or clear soot-water, thrown over the foliage, will be an advantage. In dry weather, after each watering, and the liquid has soaked down, a covering of half-an-inch of dry soil, chopped down from the sides and thrown over the surface, will check evaporation and encourage rooting upwards. By the time the plants are freely growing they should be examined, and every twisted leaf at the base, and every semblance of a sucker, thoroughly removed with the point of a knife; and by the time the plants get the size they usually attain before earthing-up, they should be carefully tied up with a string of bass mat, or anything else, to prevent the outside leaves from being broken, fixing the tie six or nine inches from the base of the plant, and so loosely as to give room for the leaves and plants swelling.

PARTICULAR TREATMENT.—This latter measure is part of this. A partial blanching is effected by this tying. When not tied too tight, the centre of the plant is encouraged to rise and become of a good size. For early Celery, this tying is commenced in July; for the general and late crop it will be soon enough in August and September. The tying, therefore, in early crops, effects, so far, the same purpose as earthing-up, without any of its drawbacks. During the time the plant is tied, you may water the root just as you please, and as it requires it. This you cannot easily do when you have got a foot or more of earth over the roots. I first saw the importance of this, by finding that beds of early Celery, with centres, showing the flower-stems, had been early earthed-up, and the roots were as dry as if they had been growing in the Sahara. I will suppose that that earthing-up was proceeded with two or three inches at a time, from July and onwards. I will even suppose that the plants received a good watering before the first earthing-up. It is manifest that the leaves would be exposed to a powerful transpiration. Dews and rains, unless very heavy, would not penetrate the earthing-up soil; the roots were soon unable to supply the moisture demanded by the leaves, and the plant revenges itself by throwing up its seed-stem to reproduce itself. By merely lifting the band a little higher, as the plant grows, there is less necessity for this gradual earthing-up; and, therefore, to secure good, early, unbolted Celery, I conceive the great thing to be, not to earth-up for complete blanching more than three weeks to a month, at farthest, before you wish the plants to be used; and this earthing to be done at once, and, at the farthest, not more than twice. With late winter Celery, a similar rule holds as to tying-up; but, of course, they should be finally earthed-up by the beginning of November. There is no danger of bolting from a similar cause then, as during the winter months, on an average, the foliage will absorb quite as much as it transpires.

EARTHING-UP.—I have mentioned lime-water for driving off slugs, snails, &c. The earth around, especially if of a clayey nature, frequently has a full com-

plement of these vermin, which make sad havoc of the outside leaves of the Celery, and mark the inner ones besides. Coal-ashes, and the residuum from a forcing-house furnaces, &c., are a good antidote to these. A small quantity will go a great way, if economically applied, so as merely to surround the plant, and nothing more. For this purpose, for single rows, and for beds alike, I have used boards, to be placed pretty close to the plants, longitudinally, or across, as the case might be, and then placed a few semicircular pieces of zinc, two to each plant, as it stood in the row, either longitudinally or across the bed. Between the boards and the plant, and these zinc pieces and the plant—a small square piece of board would answer just as well—the ashes were trundled in, and the earth banked-up in the usual way, and firmly pressed as the boards, &c., were withdrawn. By this mode, it will be seen that a cone of ashes, however narrow, surrounded each plant, and served for a long time, at least, to repel worms and slugs from eating and disfiguring the inside.

PROTECTING AND KEEPING CELERY IN WINTER.—Notwithstanding the above mode with the ashes, in heavy soils I have found the plants suffering greatly from dampings of the foliage after changes of temperature, and heavy, saturating rains. The best remedy for this is to use a lighter material than even earth and ashes for the last banking-up. I never preserved my Celery better than when I used the following means:—The plants were earthed-up fully half-way for the winter crops, as advised above. Much of the Park was then in pasture, and much rough withered matter with decayed bents was left in winter; this I was then allowed to take, by mowing it in a morning, and I did not spare it. This dryish windlestraw hay, mixed with an equal portion of tree-leaves, newly fallen, I used for *finally* earthing, or covering up my Celery beds and rows, previously giving the plants a rough, thickish dusting of ashes and soot. I have used this mixture of hay, grass, and leaves, from six inches to fifteen inches thick. If thicker, they might have heated, and frustrated my object. Whether in beds or rows—kept highest somewhat cone-like in the centre—the surface soon became so consolidated as to throw off the worst rains, while, at the same time, the mass was so loose that air could penetrate pretty freely, and yet frost be excluded. In very severe frost, extra covering was necessary to protect the exposed foliage; but, altogether, I have found nothing in stiff soils so good for covering Celery, and have often had a wishful eye to the long, useless grass from which I have been debarred. Neither leaves by themselves, nor straw, nor both mingled, answer so well; and, besides, straw cannot be got for the mere cutting and carting of it.

I prefer covering with litter, instead of taking much Celery up before severe weather, as it sometimes loses its crisp sweetness. A head of Celery from a storehouse is too much on a par with a dish of Peas obtained from a sack in Covent Garden; the bulk is present, the best qualities are gone.

And now, after all, I have said or *repeated* nothing at all uncommon; but that the piece-and-piece earthing-up of Celery, especially of that which is early, is one great cause of the plants *bolting*; and yet, simple as this idea may seem, I am certain there are subscribers that will estimate aright its value and importance.

R. FISH.

AN AMERICAN ALOE.—There is now in bloom at Eywood, the seat of Lady Langdale, an American Aloe, which is upwards of ninety years of age. The flower-stalk began to appear on the 9th of May, and is now upwards of twenty feet high. To enable it to attain its

full growth, an opening has been made in the roof of the house, and when fully developed it will have not less than 2000 blooms upon it.

NEW OR RARE PLANTS.

ABIES KEMPFERII.—A new and beautiful Fir from China, where it is called the Golden Pine. Mr. Fortune says it is named so from the rich yellow, in autumn, of its cones and leaves. These latter are from three to four inches long, and are deciduous, that is, falling off in winter. It grows in its native wilds on elevated or mountainous districts, where it reaches more than a hundred feet high, with a slender, tapering trunk, measuring at the base eight feet diameter. The timber is excellent, equal, if not superior, to our common Larch. It seems to be a connecting link between the Cedar of Lebanon and the Larch, being like the former in the disposition of its branches, and like the latter in its straight tapering trunk and deciduous leaves. It is, as yet, extremely rare; but will, no doubt, produce seeds in this country, and will then be planted largely, and prove another valuable acquisition to our hardy trees.

CEPHALOTAXUS FORTUNII (Mr. Fortune's Cephalotaxus).—Though this plant has been introduced more than seven years, yet it is very little known, and the reason, hitherto, has been its high prices. A large importation of seeds, however, took place two years ago, and now plants may be had at forty-two shillings the dozen. It is a native of Japan and China, and has proved perfectly hardy. During the late severe winter it has been fully exposed, in various parts, without a leaf being injured. It is a tree that grows sixty feet high, and must then be exceedingly handsome. Even young trees are beautiful, the foliage being broad for a *Yew*, and of a light, pleasing green. We possess, in this country, male and female plants, so may reasonably expect seeds will be produced in abundance as soon as the trees are old, and large enough to produce them.

CRYPTOMERIA VIRIDIS.—(The Green Cryptomeria).—Though the *C. japonica* has proved to be a perfectly hardy tree, yet, in some places, the leaves turn brown in winter, which detracts from its beauty greatly; whereas, *C. viridis*, a distinct species, preserves its colour in all situations, through the most severe frost,—such, for instance, as we have had during the last two winters. As an ornamental Conifer it is very handsome, and deserving of general cultivation.

JUNIPERUS SPHERICA (The Round Juniper).—This is a new Juniper, bearing a considerable resemblance to *Cupressus macrocarpa*, but is specifically distinct. It is a true Juniper, a native of the north of China, where it forms a large, handsome tree. It is, by far, the handsomest species of the whole genus, and ought to be in every Pinetum in the kingdom. It has proved to be perfectly hardy, having been exposed to the severest frosts.

RETINOSPORA ERICOIDES.—(Heath-leaved Retinospora).—A very pretty, low growing Conifer, perfectly hardy, having borne the rigour of our late severe winters. It ought to be generally grown on account of its unique appearance and beautiful green foliage.

THUJA CRAIGIANÆ.—(Craigie's Arbor Vitæ).—A newly-introduced tree from California. It was found on the banks of the river Sacramento, growing more than a hundred feet high, with a stem measuring seven feet diameter. We are accustomed to regard the *Arbor vitæ* as only tall shrubs, or, at most, low trees; but here is one that reaches to a tree of the first magnitude. Its hardihood has not yet been sufficiently tried to ascertain if it will bear our winters,—though, from the fact that others from the same locality are hardy enough, we may reasonably suppose this will prove hardy also.

WELLINGTONIA GIGANTEA (The Gigantic Wellingtonia).—This truly magnificent Conifer has been already fully noticed in *THE COTTAGE GARDENER*. I can add this interesting fact, that it has proved hardy in several places in different parts of the country.

AZALEA AMŒNA (The Pleasing Azalea).—This is a very distinct and beautiful addition to the hardy species of these showy plants. It is from the north of China, and has proved perfectly hardy. Its distinctness consists in the flowers. The corolla is double; that is, there are two distinct rows of petals, one within the other (like the *Polyanthus*—hose in hose); the flowers are of a bright purple, and produced very profusely, even on small plants. This species forces well; and, as it flowers so freely on small plants, it will be invaluable, not only to private gardens, but also to such persons as make it a business to force flowers for Covent Garden.

AZALEA BEALII (Mr. Beal's Azalea).—We are indebted to the Chinese hybridizers for this very unique and beautiful greenhouse Azalea. The flowers are of a medium size and well formed; the colour a pure white, striped very much with bright vermillion, produced in great abundance. It obtained a first-class prize at the Paris Horticultural Fête last March, where it was much admired.

AZALEA CRISPIFLORA (Curled-flowered Azalea).—A very singular species, with large flowers and very reflexed petals, the edges of which are waved, or curled, like a lady's frill. Colour, a rich rose-lake; evergreen; densely clothed with foliage; habit excellent. It is a late bloomer. I have had it in flower as late as the end of July.

AZALEA NARCISSIFLORA (Narcissus flowered Azalea).—Another singular variety, with flowers like a double white Narcissus; hence its specific name. It is from China, where it is highly prized. Flowers profusely, and is very handsome.

BERBERRIS BEALII (Mr. Beal's Berberis).—Truly a magnificent species, and perfectly hardy. Leaves very handsome, fifteen inches long, composed of several pairs of leaflets, the terminæ one five inches long and three broad; the side leaflets are also proportionably large. It is, as yet, very scarce and dear; small plants cost 6s. each. Native of Japan.

SKIMMIA JAPONICA (Japan Skimmia).—This plant bears a considerable resemblance to the well-known *Ardisia crenulata*, only it is a more dense bush, and is very hardy; blooming in May, and the blossoms are succeeded by a profusion of rich crimson berries, which remain perfect on the tree the whole year. The flowers are fragrant; altogether it is a most desirable addition to our hardy dwarf plants. T. APPLEBY.

(To be continued.)

SULPHUR versus MILDEW ON THE HOP.

AMONGST the many evils which the horticulturist has to combat, there is none which has afforded a larger scope for experimental investigation than the "Mildew" in some or other of its forms. For though it is common to designate as Mildew most of the lower class of vegetation which lives on and consumes both vegetable and inanimate objects, still there is, doubtless, an innumerable family of this singularly curious production, and some, of late years, have spread to such an extent as to become "national calamities;" as, for instance, the Vine Mildew in the wine countries; and, to a partial extent, it has been hurtful at home; but its attacks here have not been of that virulent character which they have assumed elsewhere; and, in many instances, it has been overcome by the means applied, and, it is generally believed, that it might, in all cases, be subdued by taking the proper means. Be this, however, as it may, my pur-

pose is to call attention to Mildew on another plant, and, doubtless, another variety, although, to outward appearances, they seem much alike—I mean the *mould* on the Hop, as it is commonly termed.

This strange visitation has, of late years, attracted much notice; and many spirited cultivators have endeavoured to cure it, with varied results. One thing, however, it is proper to observe, the "Hop mould" is not a new evil, for it seems to have been as prevalent a century ago as now; but it is only of late that the present popular antidote to it, sulphur, has been tried to any great extent. Other means had been tried without any satisfactory result, and now sulphur, like Holloway's Pills, is put forth as a remedy to all the evils the plant is liable to suffer from; and, I dare say, has effected as many cures as that far-famed medicine. Still, there are many sceptics, and many a warm controversy has arisen on the matter, when another party, armed with extraordinary powers, steps in and forbids the use of sulphur as an anti-Mildew application to the Hop plant, alleging, that large quantities of beer had been spoiled by it, and that, therefore, Hops so dressed were useless, or worse than useless, to the brewer.

The circular which contained this extraordinary intelligence concluded with an intimation that the compilers of it (the most extensive merchants in the trade) did not intend to buy any Hops without a written certificate from the grower, that no sulphur had been used amongst them during their growth. This manifesto would have created greater alarm last year than in the present year, as the prevalence of mould, last year, induced many growers to use sulphur extensively, while, this year, mould has not been so common.

Now, the question arises, Are the merchants right in their condemnation of sulphur, or not? If they are right, then the public at large will ask, Why is sulphur used so extensively in the manufacturing—i. e., in the drying of Hops, if it be deleterious in their growth? for it is well-known that some growers use sulphur, when drying their Hops, to the extent of one cwt. of sulphur to one ton of Hops, and possibly more.

As many readers of *THE COTTAGE GARDENER* may be strangers to the whole process, I may just say, that when the Hops are picked in the field, or garden (being picked quite as often wet as dry), they are carried home in sacks to a sort of kiln, or loft, the floor of which is laid with hair-cloth instead of boards, and the timbers are generally Poplar, as being the most incombustible wood we have. This kiln, called an oast-house, is often of a circular form, terminating with a long conical roof, having a large cowl at its top to allow the steam, or vapour, to escape. Underneath this kiln, or floor, one or more fires are kept, either of charcoal, coke, or anthracite coal, or all three mixed. The fire is sometimes open at top, and sometimes a plate of iron is suspended immediately over it, or a sort of skeleton brickwork with a few tiles cemented at top, is made to spread the heat, rather than allow it to ascend in full force to one particular place; for, be it observed, it is a wooden-joisted frame-work over it, and that often not more than eight feet from the body of the fire, so that it is surprising accidents do not happen oftener than they do. The constant attention paid them, and the damp load they carry, added to the non-combustible character of the timber, all tend to prevent accidents, which, however, do now and then occur. This is the grower's concern, and the general reader will be satisfied to know that the green, or wet Hops, are laid on this kiln of hair-cloth to the depth of nearly a foot, and that they lie there till dry, the heat from below passing up through them. But as mere drying would not remove the natural greenness, or diversity of colour with which they are tinted, and as fashion will have every article brought out to market "nice looking," custom has established the use

of sulphur as a bleaching medium, and, consequently, large quantities of common roll brimstone are thrown on the fire soon after the Hops are laid on the kiln, and the ventilators being stopped up, the fumes are made to pass through the Hops, blanching them to that pale-buff, or lemon-colour, which John Bull has decreed to be "excellence," on the same principle that the Chinaman colours our tea, the confectioner our pickles, and that we court the other thousand and one absurdities, according to the evidence of the *Lancet* and other papers.

In the instance of Hops, there is, certainly, less excuse than for most things else; for if the object be merely to gratify the eye (which is all but universally admitted), the few who are so gratified exact a heavy contribution on the public at large; for there are but few who see the Hops in a manufactured state, compared with those who are drinkers of beer; whereas, in most of the other articles, coloured or adulterated to please the eye, they come immediately before the consumer in that shape.

But a more ugly question arises. Do the fumes of brimstone impart any deleterious quality to the Hop, or do they not? This very important question has a right to be known; and I confess that I have not heard any one acknowledge it did any good, beyond *improving the appearance of the sample*. Some driers affirm the Hops dry more quickly when sulphur is used. Granting this; is that any advantage to the quality of the article? while I think few will admit that sulphur fumes are agreeable accompaniments to food or drink in other ways. Would any one like to eat a beefsteak cooked on a gridiron over a brimstone fire? and yet there is a greater similarity than many imagine. If the one is unpalatable, the other is only less so by being diluted or counteracted by other things; for, most certainly, sulphur does not impart anything useful to the Hop which it did not possess before.

I ought before to have observed that the brimstone is put on the fire at the commencement of the drying process, and that the fires are kept on for some hours after it is done with, the whole drying occupying from eight to twelve hours, or a little more; but, in a general way, two kiln-loads are done in the twenty-four hours, the process always going on night and day, and the loading regulated by the supply, but never exceeding a certain quantity. I may observe, that when charcoal is much used, a less quantity of sulphur is wanted, the charcoal containing a little of that article, or something analogous to it within itself. Coke has not so much; and one little benefit the men employed affirm is, that after the fumes of sulphur have passed through the Hops they lie more light; this may possibly be owing to the air amongst them being more rarified, or some like cause occasioned by the expulsion of the ordinary atmosphere. One thing is certain, that the fumes of sulphur passing through the Hops become, in a great measure, divested of their deadly quality; for though vegetation near at hand will suffer a little by its falling upon them, it is not to the extent that might have been expected; therefore, some of its poisonous qualities must remain amongst the Hops, and certainly to their injury.

The subsequent treatment of Hops may be easily guessed at; they lie on the kiln, as above, until they are turned over, and shortly after are taken off and spread over an airy loft adjoining to cool, when they are packed in large bags for market, the packing being done by a man treading them in, the bag being suspended at the time; but immediately the kiln is emptied, it is loaded again, and the same process is going on as before.

The whole process has, like that of many others, worked itself into such a system of routine, that it would be difficult to alter, excepting some high authority, like the republic of brewers, were to issue forth a decree

forbidding the use of sulphur in the drying, as they have done against its employment in the growth of Hops, and then we might see if there be any use or any harm in the sulphur; for most likely the party interested would find an organ somewhere.

In the present case, the growers are far from satisfied that the losses said to be sustained by some of the London brewers have been by sulphured Hops, as affirmed in the manifesto of their factors and one of the most popular brewers in Kent, himself being a grower of Hops, has come forward and affirmed that he has used sulphur to his growing Hops rather extensively for the last six years, and found no detriment to his beer. In the latter respect, I believe hundreds will bear him out. The Editor of a contemporary paper also takes up the matter; but his remarks tend rather to mystify the matter than clear it; for he finds fault with the factors' circular, intimating that the sulphur is incorporated into the Hop, forgetting, at the same time, if the sulphur be adhering any way to the scales forming the Hop, or mingled with the pollen constituting its principal bitter, it is still there, and, perhaps, in greater strength than if it passed through the tissues of the plant; and I do not know how it could be applied to benefit the plant and overcome the mould, without a considerable part being likely to adhere to, and ultimately be carried away with the Hop at picking time. Here, then, is the question upon which, at the present time, public opinion is much divided, and which may be divided into several heads, somewhat as under:—

1st. Does sulphur, assiduously applied, overcome the mould in all cases? and can it be profitably done without injury to the Hop plant?

2nd. Do sulphured Hops injure the beer brewed with them?

3rd. Is the application of sulphur in the drying of Hops injurious? The mere appearance of the Hops in this case being set aside?

4th. Is there any other remedy for the evils complained of in sulphur that can be usefully and profitably applied instead of that article?

With the opening of these questions, I find I must close for the present, but not without promise of recurring to it again. I confess being unable to give a decided opinion on it any way; for those whose experience has been gained at the expense of scores of pounds, seem much divided on the qualities of sulphur as an antidote to "mould"; and it is only fair to suppose the Hop-merchants are equally accurate in the conclusions they have come to. But the whole matter is one of facts, and, however high the standing may be of any party who assumes to be a law-giver in the case, the evidence of half-a-dozen credible witnesses of facts of an opposite tendency must weigh down his opinion. I may, however, observe, that no one has assailed the use of sulphur in the drying, that I know of; but if it be hurtful in one case, I think it must be so in another.

J. ROBSON.

DEEP CALLING UNTO DEEP.

By the Authoress of "My Flowers."

AFFLICTION and sufferings are by no means signs of God's wrath towards the children of men. What a blessed consolation it is to feel this! Rather are they evidences of His love and good-will to sinners; for either they are intended as *pruning* strokes to cause the fruitful branch to bear "more fruit," or as a *digging* strokes, to see whether the unfruitful tree will yet bud and blossom to the praise and glory of God. There is more real wrath apparent to the eye of a *believer* when he sees people flourishing like green bay-trees, and that "are not in trouble as other men, neither are plagued like other men." The child of God is

sometimes ready to faint in spirit under his own chastenings, when he sees the prosperity of the wicked; but when he goes into "the Sanctuary of God," when he views what passes round him by the light of scripture, and interprets all by the Word of God, he is confounded at his own stupidity, overwhelmed by the sight of God's goodness and glory, and laid prostrate in the dust. Then he can embrace and kiss the rod, and tremble instead of marvel at the "slippery places" of ease and "fatness."

When it has pleased our Father to appoint us to singleness of estate, trials must be, in a great measure, personal. There must be either lack of worldly substance, or bodily infirmities, or, perchance, a *disappointment*, as it is mildly termed, to act as the spade, or pruning-hook, in the hand of the Great Husbandman; but when, in the providence of God, we have olive-branches round about our table, it is most frequently through them that wholesome culture is applied, and surely none reaches the quick so keenly and so sensibly as this.

Mr. Gresham held a civil appointment under government, and resided in the town of F——. He was a man of high and religious character, and his lady not only devoted her time to the care of her children and her household, but to the benefit and improvement of the lower classes around her. She was beautiful in every relation of life, and her example and influence, quiet and unobtrusive as they were, were sensibly felt and respected even where they might not be followed. A household conducted and governed by the highest of all principles, in fact, the only ones that can be called *high*—the love and fear of God,—is a blessed witness for the truth among the ungodly world around; it is a church within the church; and who can tell how many times the Lord may have mercy upon a city, or a people, "for ten's sake?" Mr. and Mrs. Gresham were a happy and a holy couple, and their children were brought up "in the nurture and admonition of the Lord." But though parents can train up a child in the way he should go, they do not always reap the fruit of their labours. Young men, especially, are exposed to fiery trials and temptations while their religion is yet "green in the ear," while the seed sown has not ripened, and their youthful minds are soft to receive every impression that is agreeable to taste, and to corrupt nature that dwelleth within.

Seymour Gresham, the eldest son, was intended for the navy, and was educated at a naval school. He was placed as cadet in a small gun-brig, commissioned for the African station, and entered the service under greater advantages than many other boys. He was well-prepared by his studies—nearly fifteen years of age—and had relatives connected with the sea, whose interest and position might be of eventual benefit to him. A lady, whose little son of twelve years old, just taken half-fledged from school, and knowing nothing whatever of nautical knowledge, sailed in the same brig, sighed when she thought of young Gresham's superior advantages and steadier age, and almost mourned to think how much her boy would feel his inferiority, and what uphill work his would be, from his youth and ignorance. But "the race is not always to the swift, nor the battle to the strong."

Young Gresham wrote regularly and fully to his parents, and their letters carried comfort to the heart of the other mother, who rarely heard from her little son, and who felt satisfied of the blessing of sending older lads to sea, who had understandings in a measure ripened, and knew their duty to those left weeping at home. The weary three years, however, passed, and the brig was at home again. It was a singular circumstance that those two boys should again serve together. They were named to the same frigate, as midshipmen, and went to a foreign station. This time, however, Seymour Gresham was not so good a correspondent, and his parents, in their turn, received much of their intelligence from the other mother, whose son had somewhat improved as a letter-writer. When Seymour did write his letters breathed much depression of mind; and a friend, who met him on one of his excursions ashore, wrote word that he was looking ill, and in exceedingly low spirits. Mr. Gresham and his lady were loving and tender parents, and this mysterious sadness distressed them greatly. Their son had, they knew, felt an attachment during his residence in England, and they could only suppose that the premature

death of the young lady, which happened soon after the frigate's departure, had made a deep impression upon him. Beyond this, no idea entered their minds, and they trusted and prayed that the changes and occupations of a sailor's restless life might weaken and soften the grief.

About half the period of young Gresham's service had expired, when a blow fell heavily—the first blow—on the heads of his fond parents. They received information that their son was returning home from his ship disgraced and dismissed.

I need say nothing to such of my readers as are parents of the feelings which this communication called forth, feelings hitherto unknown in the happy household, where prayer and praise had daily been sent up for mercies given and desired. But there is one certain fact;—that where the Lord is known, where He is worshipped, and found near and dear to the soul, *then* trouble loses half its sting, and a refuge that the world knows not of is open and ready for the afflicted to flee into and hide themselves. Worldly persons will call upon God in trouble, but they do not know Him; they cry to Him as a drowning man cries, in hopes that some passer-by may hear him; but God's children know their Father is by their side, and they throw themselves into His arms and weep on his bosom.

Readers! are any of you thus troubled? If you have not already a Father at hand, *seek Him*. Learn—*pray to know Him*, for a strange and unknown God can be no comfort in our extremity. And let us remember that God is only to be found "in Christ." "He is the Way, the Truth, and the Life," and we must seek God in Him. When we have entered into this rest, our Father is always with us, and whatever trial falls upon us, He will embrace us with His arms, and sustain us under it.

In my next paper I shall proceed with the history of these tried and afflicted parents.

(To be continued.)

ISLAND-PLANTING.

YOUR Correspondent will find the Portugal Laurel much hardier than the common Laurel. I could show him splendid masses on the margins of Islands (within a few hundred yards of the Thorn Parlour I am now writing in), sweeping and kissing the silver waves, with numerous branches, a dozen feet from the banks of the Islands, imbedded in the bottom of the lakes, sending up through the water a host of progeny, who, under the protecting care of their parents above them, are quite at home, and apparently on comfortable terms with the water-nymphs, and their natural enemy, the frost. Indeed, no hen ever took better care of her chicken than these old Laurels over their young family; they also are to be seen pushing their young heads through the old branches—not to go to war with the Russians, but to fulfil what nature has ordained for them—to contend with elements that have proved fatal to their family, that their parents have withstood for a century, and they in their turn will soon have to defend their aged progenitors from the storms, to allow them to repose and decay in peace.

This is a true lesson of nature, and though it may be lost on human butchers, and those that license them, let it not be lost on us planters. Depend upon it, that whether we plant on high or low situations, a few extra common trees, when planting, as nurses and protectors, are well bestowed. But enough, for once, of prosing. And now, for supposing the Island in question to have no grass nor dressed walks, I should plant along the margin St. John's Wort, Common Savine, Dwarf varieties of the Periwinkle, Cotoneasters, Small-leaved Ivy, Berberis repens, Spurge Laurel, &c. &c. Back them up with *masses* (all *masses*) of Portugal Laurels, Rhododendrons, (if suitable mould, if not, do not plant them, for nothing looks more miserable than starved plants; such covering as Mr. Beaton recommends will not do—is tricksey exposed, at best) Common Yews, Box, Berberis aquifolium, Siberian arbor vitæ, &c. Also in masses amongst them, Scarlet Thorns, Mountain Ash, Laburnums, Single Snow-Ball, Guelder Rose, Common Barberry, Rhus Cotinus, one of the Sumachs, a ditto Common one, &c. If room, Turkey and

Scarlet Oaks, Scotch Firs, and nothing better than Silver Fir, if protected when young; Scarlet Chestnuts, the large-leaved Weeping Elm, and Lime. All these will do well in a low, damp, situation; and, if arranged with judgment, will make a splendid whole, and will require little trouble after established.—D. FERGUSON, *Stowe, Buckingham.*

THE HOUSEHOLD.

(We shall be much obliged by any of our readers sending us approved receipts in cookery, hints for household management, or any other domestic utilities, for insertion in this department of our columns.)

Curd Cheese.—A light, delicious, and nourishing dish for children, invalids, or company, may be made with a large dessert-spoonful of rennet added to a pint-and-a-half of new milk, either fresh from the cow or heated lukewarm. In the latter way it is best and pleasantest for children or invalids. For company, a perforated tin shape may be used. With fruit pies it will be found a pleasant substitute for custard. When turned out of the mould into a dish, fresh fruit may be placed round, to be eaten with it instead of pie. Pounded loaf-sugar and cream should be served in separate basins, as an accompaniment, to be eaten with it. In this way it will be found an excellent second course dish for dinner. If the cheese is to be eaten without fresh fruit or pie, it may be served with cream and pounded sugar, and be flavoured with ground nutmeg, brandy, ratafia, essence of lemon-peel, or any other flavouring. The essence may be had of any of the grocers or oilmen. The perforated moulds may be occasionally met with at old-fashioned ironmongers', &c., and in the kitchens of old families.

To PREVENT RUST.—Melt together three parts of lard and one part of rosin. A very thin coating will preserve ironwork, such as stoves and grates, from rusting during summer, even in damp situations.

Writing Inks.—The scientific journals have lately contained some account of a paper recently read in the Society of Arts, Edinburgh, on the subject of writing inks or fluids. In 1842, the author of the paper, Dr. J. Stark, commenced a series of experiments on writing inks, and in the course of these has manufactured 229 different inks, and tested the durability of writings made with these on all kinds of paper. As the result of his experiments, he has satisfactorily ascertained that the browning and fading of inks is the consequence of various causes, but in ordinary inks chiefly from the iron becoming peroxygenated and separating as a precipitate. Many inks, therefore, when fresh made, yielded durable writings; but when the ink became old, the tanno-gallate of iron separated, and the durability of the ink was destroyed. The liability of common inks to be injured by using steel pens in them is pretty well known. Dr. Stark exhibited a series of 18 inks which had either been made with metallic iron or in which metallic iron had been immersed, and directed attention to the fact, that though the depth and body of colour seemed to be deepened, yet in every case the durability of writings made with such inks was so impaired that they became brown and faded in a few months. The most permanent ordinary inks were shown to be composed of the best blue gall nuts, with copperas and gum, and the proportions found by experiment to yield the most persistent black, were six parts of the best blue galls to four parts of copperas. Writings made with such an ink stood exposure to sun and air for twelve months without exhibiting any change of colour; while those made with inks of every other proportion or composition had more or less of their colour discharged when similarly tested. This ink, therefore, if kept from moulding and from depositing its tanno-gallate of iron, would afford writings perfectly durable.

Dr. Stark has ascertained, by repeated experiments, that the addition of logwood, in any way, only tends to destroy the colour sooner. All inks made with logwood in them faded sooner than pure gall inks. Even the addition of logwood to a good durable ink from galls will cause the ink to fade rapidly. Sugar has also been ascertained to have a

bad effect on all inks, and especially on such as have any logwood in them. Dr. Stark has also ascertained that immersing iron wire or filings in the *very best* inks, destroyed their durability as much as similar treatment did *ordinary* inks. He, therefore, recommends that all legal deeds or documents should be written with quill pens, as the contact of steel invariably destroys more or less the durability of every ink.

The ink which Dr. S. prefers for his own use is composed of 12 oz. of best galls, 8 oz. of sulphate of indigo, 8 oz. of copperas (sulphate of iron), a few cloves, and 6 or 8 oz. of gum arabic, for a gallon of ink. This never moulds, and is of an intense pure black, which never fades or changes colour.—*American Country Gentleman.*

PRESERVING SUMMER FRUITS.—Such fruits as Strawberries, Raspberries, Blackberries and the like, may be preserved in the following manner cheaply, and their flavour be retained:—Put sugar over the fire, at the rate of half-a-pound to a pound of berries, add a little water, and when hot take up the fruit in a skimmer and dip it into the sugar, holding it there for half-a-minute, perhaps; then take it out and spread it on the tins. Go through the whole lot in this manner. Then boil down the sugar to a thick syrup, and pour it over the fruit. Set the tins either in the sun or in a warm oven till the berries are dried through in thin gelatinous cakes. When thoroughly dry, put the cakes in a bag and hang it out of the way. The cakes will keep as long as wanted, and may be used in a few minutes, by the addition of a little hot water—more sugar being added if necessary. The beauty of this mode is that the flavour of the fruit is retained, while there is no danger of its spoiling by fermentation. Fruits, when preserved in the usual way—pound for pound—are made too sweet, and lose their distinctive flavour so much that it differs little whether it is preserved Peach or Potato. Besides, without care preserves are apt to ferment and spoil.—*Prairie Far.*

TOMATO SAUCE.—There is great difficulty in keeping this sauce in the way described in page 414. All sauces made in the way there indicated should be subjected to the "Bain-Marie" for half an hour, that is, to place the bottles, when full and uncorked, in a large fish kettle, fill it with cold water, place it on the fire, and allow it to boil for half-an-hour, remove it, and cork the bottles whilst hot. But the best and easiest way for those persons who grow Tomatoes, and who have not a convenient market for them, is to treat them as they do in the south of France. When the Tomatoes are ripe, pulp them through a sieve to remove the skin and seeds, to the pulp add a little salt to prevent fermentation, then strain it in a flannel bag, like a jelly-bag, by which all the water is removed; then put the pulp into bottles, the smaller the better, with two or three allspice to each bottle, place the bottles in a "Bain-Marie," subject them to one hour's boiling, cork and cement whilst hot. By this plan the colour is not destroyed, and the cook can make use of the pulp for any sauce he pleases.

A NEW SAUCE WITH TOMATOES, EXCEEDINGLY GOOD.—To two quarts of the pulp of the Tomato add the pulp, when boiled, of four quinces and two sour apples, or the pulp of a middle-sized West Indian pine-apple, to this add one pint of Chutnee, as obtained from Crosse and Blackwell, and half-a-pint of French mustard (*Moutarde de Maille*), bottle in wide-mouthed bottles, cork and cement. This is excellent when added to curries, or for hashed mutton, beef collops, &c., or with broiled fowl, of course adding gravy to it. The above makes a very excellent thin sauce, like the Worcestershire Sauce, if to every quart, two quarts of the *Ne plus ultra* Vinaigre (for recipe of which see below) be added, and boiled in an earthen pan for twenty minutes and bottled.

SALAD OF COOKED VEGETABLES.—At this season of the year it frequently happens that vegetables, such as French Beans, Broad Beans, Cauliflowers, Potatoes, &c., are left from the dinner, and, in a general way, these go to feed the pigs; but a very nice refreshing salad may be made of them, by mixing them together, cutting the cold Potatoes in slices, the Brocoli stem, and all likewise into pieces; adding pepper and salt, a little oil and vinegar; or use the *Ne plus ultra* Vinaigre without oil.

THE NE PLUS ULTRA VINAIGRE.—This is the name given to it by the party from whom I received the receipt in the vicinity of Bordeaux, in France. I believe it has never before been in print. In addition to its fine refreshing flavour, it is an excellent stomachic; and for those suffering from indigestion, or dyspepsia, a most invaluable ingredient with all kinds of food. Take one quart of young Nasturtium seed, two flowers of the French Marigold, four sprigs of Tarragon, one Shallot, or a clove of Garlic, pound these in a mortar; when pounded, place them in a bottle, and add to them one quart of distilled White Wine Vinegar, cork the bottle, and let it remain in a warm (not hot) place for fourteen days; decant off the vinegar, and keep for use. I believe it is not generally known, that for those troubled with flatulency and indigestion, a seed of Nasturtium, eaten before breakfast, is a great relief.

SORREL.—This is an excellent vegetable to be eaten at this time of year by those suffering from scorbutic affections, or disease, and is very good to give to children, particularly those who partake largely of sweetmeats. It is cooked exactly like spinach, that is, boiled in plenty of water, with a little salt; it may then be chopped up with a little butter and served, and eaten with any roast joint.

SORREL-SAUCE.—It should be cooked as above, then pressed with a wooden spoon through a hair-sieve; then put into a saucepan with a little butter, pepper, and salt, and a little lemon juice, boiled and served under anything, that may be required, as lamb cutlets, sweetbreads, &c.

SORREL SOUP.—Proceed as for the sauce; but to every pint of sorrel add one quart of good beef gravy, in which has been boiled one onion, some parsley, one turnip, and a carrot; pass these through a sieve, like the sorrel, and add to it; put it in a saucepan and boil, adding one teaspoonful of sugar; the gravy having previously been seasoned with pepper and salt. Serve with fried bread cut into small squares, like dice, or with toasted bread. This is a most excellent soup for those suffering with diseases of the skin.

In France, the Sorrel is boiled and mashed together before being taken to market, and is then sold by the pound weight; most tradesmen's families at this time of the year partake of Sorrel in some form. The French, both young and old, being such lovers of sugar, find it peculiarly refreshing. Sorrel may likewise be served, like spinach, with poached eggs.

APPLE PIE WITH PINE APPLE.—West Indian Pine Apples being plentiful at this time of the year, a small quantity being added to an apple-pie gives it a delicious flavour, similar, but superior, to the Quince.—G. W.

A TOMB FOR THE MILLION.

OF all the plans and propositions for securing a decent resting-place for the dead, without injurious effects to the living, I have seen none, in my opinion, at all likely for the million. I, therefore, take the liberty to lay the following ideas before the public, believing, that if carried out, the plan would answer the purpose.

For instance, if a piece of ground was selected close to Watford Station, say 14,000 feet square, this would give room for 8,000,000 bodies, allowing seven feet in length by three-and-a-half feet in width for each; and supposing it was enclosed by a wall fourteen feet in height, and allowing three feet in depth for each body, it would hold four in depth, and leave room for two feet of earth, above the twelve feet of concrete that I advise to imbed the coffins in. This alone would hold 32,000,000; and supposing there was a set-off of 100 feet at the height of every fourteen feet, till it was reduced at the top to 200 feet square, it would reach about 1,000 feet in height, and hold upwards of 700,000,000, giving seventy noble terraces of all aspects, the lowest 56,000 feet in length, and the highest 1,600, and all 100 feet in breadth, which would allow of thirty feet for gravel, and thirty-five feet on each side for turf, vases, flowers, &c. I would plant an avenue of *Cedar of Lebanon*, *Cedrus deodora*, *Common Yew*, and *Auracaria imbricata*, on the lower terrace, and so on with the hardy varieties of Coniferæ with the other terraces, giving them ample room, so that

the sun and air would not be obstructed, and also allowing room for Thorns, Laburnums, Lilacs, &c. &c.

What a scope for tombs for all classes, and all descriptions of architecture, along the front of the terraces! The interior could also be turned to account to those that admire subterranean caverns and gloomy halls to lay their dead. Those that prefer an unearthly effect would have scope here to their heart's content; the gas, the bell, the organ, &c., could be made to work wonders for them.

I would have a railway under the terrace walks to reach the top, with others to traverse it for convenience. When the pile was completed, the space could be used for tombs or kept as a railway, to carry visitors that wished to enjoy mountain air without personal inconvenience.

My reason for saying Watford is, that it is an easy distance from London, and with the exception of stone for the front of the terraces, the materials are on the spot—chalk to make lime, and gravel to mix with it to make concrete. There is also one consolation for the living—it is high and dry; and their feelings would not be hurt by seeing their dead friends placed in water, which is frequently the case in the churchyards in this country, which is certainly no honour nor credit to the clergy that have the charge and benefit of them.

In constructing the pile, I should have moveable frames, sufficiently large to allow room for the coffins, and about two inches of peat charcoal, so that when the corpse was brought to the place of interment, it would only be necessary to lower them into the place allotted for them, and fill up the space with the charcoal, common soot, or burnt earth, and place slabs of concrete, which had been previously prepared, over the place. After the followers had left, it could be made up with concrete to the height required; and in cases where friends wished to lie near each other, the place could be left vacant, and be covered with slabs, as above, till wanted, which would allow of the whole assuming a finished appearance.

I should have moveable chapels in connection with the railway, so that the burial service could be performed under cover.

One pyramidal tomb, of 7,000 feet square, would hold 90,000,000, and reach about 500 feet in height; one of 700 feet square, reducing the width of the terraces to 50 feet, would hold 200,000, and reach about 90 feet in height; one of 300 feet, reducing the terraces to 25 feet, and the top to 100 feet square, would hold about 36,000, and reach about 70 feet in height. Tombs on this principle would do away with disturbing the graves, at least for a much longer period; and, in my opinion, if established in places such as Watford, would enable companies to find a place for the dead, to convey the mourners there and back at little expense, and to realise a good remuneration for their capital.

The purchase of the land would be the principle of the capital required, as the pile would progress only according to the interments, and, therefore, would be a ready-money affair. Why should not the railway companies carry out such a plan as the above—they have waste land enough? The London and North-Western, for instance, could bury millions of bodies on this principle, without purchasing any land at Watford.

Railway carriages for the dead ought to be so constructed as to admit two inches of peat charcoal all round them to prevent infection.

Cemeteries, if carried out as the law now stands, will occupy a great part of the land, and become very expensive to keep in order. Indeed, the celebrated one at Kensal-green has already assumed the appearance of a common churchyard.—D. FERGUSON, *Stowe, Buckingham.*

THE COTTAGE GARDENER *versus* MACLISE.

IN THE COTTAGE GARDENER (June 19), fault is found with MacLise's picture, No. 78, of the Royal Academy's Catalogue for the present year, because it is wanting in truth. The period is the fifteenth century; the country, France; but, says the critic, "neither the Passion-Flower, nor the Fuchsia are natives of France. * * * The Fuchsia was not known to Europeans until some thirty

years ago; nor even the Passion-Flower, until Shakspeare had been some thirteen years in his grave!" There is much cant in the gardening criticism of painters; and while "care is bestowed upon costume," &c., I, for one, feel it unkind to deny to painters the use of the materials which modern gardening has provided for carrying out effectively the mere ornamental points in their pictures. The scene is stated to be "Lawn before the Duke's palace;" and why does the critic limit the painter to the representation of "native" flowers there. There is no prettier lawn plant than the Fuchsia, and it has been long enough known as a hardy plant in our gardens to be a familiar object to every eye. The Passion-Flower can boast even greater antiquity. We daily see castellated dwellings that speak forcibly of former times and of conditions of society widely different from what we enjoy, surrounded by gay flower-gardens of bedding plants, the offspring of recent years. Here is an anachronism in ornamental art, if one is wanted, within the garden-wall; and if it is wrong in principle, it is greatly more extravagant than the small liberty which Maclise has taken to relieve his picture. With regard to your critic's concluding objection, it is not the fact that the season of the "sere and yellow leaf" is inappropriate for representing a Fuchsia in bloom in the open air. Neither is it the fact that the Fuchsia was not known to Europeans "until some thirty years ago" (See Bot. Mag. tab. 97. And the critic may also read the motto on the title-page of that volume). The critic, therefore, fails when judged by his own standard; and I would beg of him to re-read his quotation from Orlando, as an echo from Maclise to himself:—"I beseech you, punish me not with your hard thoughts, wherein I confess me (*not*) guilty. * * But let your fair eyes and gentle wishes go with me."—Rus.

[We do not know what our correspondent means by "cant in the gardening criticism of painters," but we do know that no man of judgment will argue that any anachronism should be tolerated in historical painting. If a scene of the 16th century be represented, beyond all doubt, the costume, buildings, and plants should be those only of the same age, and that were known in the same country. To maintain a contrary opinion, is to maintain that Othello in a turban is not to be preferred to Othello in a perriwig.

The Fuchsia was introduced in 1788, instead of "some thirty years ago," as we hastily wrote; but what has that to do with Mr. Maclise's anachronism? When he paints a fancy picture, then let him give the rein to fancy; but never, when, as an historian, writing with his brush, let him give Ophelia a wreath of South American orchids, nor even of Fuchsias, though there may be "no prettier lawn plant" than these. When Mr. Maclise portrays Ariel, he might, without any impropriety, decorate him with flowers of all climes, and without any care for when they were first known to Europeans, for Ariel might have said with the Fairy—

"Over hill, over dale,
Thorough bush, thorough briar,
Over park, over pale,
Thorough flood, thorough fire,
I do wander everywhere
Swifter than the moon's sphere."

HIVES, ASPECT FOR, AND LIMITATION OF THEIR NUMBER.

THE aspect of the hives, though the great heat of summer is injurious to Bees, yet the sun, no doubt, favourably affects them, as the earlier it comes on the hive the sooner they are out, and secure the morning sun. They should, therefore, be placed towards the east, or south-easterly, the mid-day sun being kept off by a shade. In some places, however, one aspect is best, and in some another.

One cause of honey being wasted, and one place being more stocked than another, and the bees being starved in middling years, as is often the case in middling years amongst us, is to be found in the number of hives which each bee-keeper has. In Germany, I find the number to each cottage is by law prescribed, and thus there is an equal distribution of hives.—W. H. MAJOR, *Welton Rectory*.

DERIVATION OF NEMOPHILA.

"I am much surprised that it did not occur to your numerous correspondents and subscribers to trace the origin of the name of the beautiful flower Nemophila, to its being compounded of the verb *νεμω*, nemo—struo, distribuo, to scatter around; and *φυλλον*, plural *φύλλα*; this, I hope, will settle the orthography, and that it will be written Nemophilla. This is quite the nature of the Plant, to distribute its branches and leaves.—A NEW SUBSCRIBER."

[We think this subject is now exhausted, and we must decline inserting any more communications relative to it. In our opinion, Mr. Beaton's communication, at p. 241, "settled the orthography;" for he there showed, beyond doubt, that Mr. Nuttall suggested the name from *nemos*, a grove; and *phileo*, to love; because the first discovered species, *Nemophila phacillioides* has "a predilection for woods, in which places only it is found." To argue against this fact, reminds us of Cowper's geologists, who

"drill and bore
The solid earth, and from the strata there
Extract a register, by which we learn
That he who made it, and revealed its date,
Was mistaken in its age."—ED. C. G.]

VEGETABLE CULTURE AND COOKERY.

BALM.

ALTHOUGH Balm cannot be called a vegetable, in the culinary sense of the word, it is one of those plants which come under the denomination of herbs of the kitchen-garden; and as I intend to treat of these, whether cultivated as pot-herbs, or for medicinal purposes, it comes in here in its alphabetical order.

Balm is a medicinal plant, which has long been cultivated in gardens for its leaves and young shoots, which are used for making drinks said to be beneficial in diseases of the head and nervous system; "sovereign for the brain, strengthening the memory, and powerfully chasing away melancholy." The plant is propagated by division, either in March or September; the portions chosen being planted out in rows, at a distance of a foot apart, in a rather damp situation, if such can conveniently be obtained. The further cultivation consists simply in keeping the plants free from weeds, stirring the soil, and repeating the operation of fresh planting every third or fourth year.

The young leaves and shoots may be used any time during the summer and autumn while green; but for the winter supply it is necessary to dry them. For this purpose, the whole plant must be cut down close to the ground, just before it comes into flower, and the stalks tied into small bundles, which are to be hung up in a shed, or some other shady and airy place, and when they are thoroughly dry, they may be kept in boxes, bags, or drawers, till ready for use.

BALM WINE.—To four gallons-and-a-half of water add twenty pounds of lump sugar, and boil it gently for an hour; after which put it in a tub to cool. Then bruise two pounds of the tops of Green Balm, and put them with a little yeast into a barrel, and when the water in which the sugar has been boiled is nearly cold pour it on the Balm. After stirring it well together let it stand for twenty-four hours, during which time it must be frequently stirred; bung it up, and after six weeks bottle it off, and put a small lump of sugar into each bottle. It improves with age.

BALM BEER.—Eleven gallons of water and ten pounds of brown sugar are to be clarified with the whites of twelve eggs, carefully skimmed and boiled till nearly reduced to ten gallons. Two pounds-and-a-half of the Flowers of Balm being put into a cask, the liquor, when milk-warm, is to be poured over them, and four or five tablespoonfuls of thick yeast added. The cask must be filled up, morning and evening, with what works over, and be bunged up when fermentation ceases. In a month, the beer may be bottled, and in two or three months it will be fit for drinking. Half the quantity of the flowers will probably be found to be enough, if added when the fermentation is nearly over.

BALM TEA.—This is recommended as a useful, and, to many, as a very grateful drink in dry, parching fevers. It

is made by infusing the plant, either in a green or dry state, in water, and communicating to it a slight acidulous taste by the addition of lemon juice; but when it has been sufficiently infused the herb should be removed, or the tea strained from it.

BASIL.

There are two sorts of Basil, the *Sweet* and the *Bush Basil*; the latter so-called from its dwarf, bushy habit of growth; the former is that which is more generally cultivated. They are both used as pot-herbs for seasoning soups and sauces, and sometimes, also, they are sparingly introduced as an ingredient in salads; in all cases they communicate the flavour of cloves.

Both sorts of Basil being tender, they require to be raised on a slight hotbed in March, thinned out as they gain strength, and after being gradually hardened off, when they are three or four inches high, they are to be planted out on a warm border in June, nine inches apart, and watered till they are established. They will be ready for use at the end of June, and continue throughout the autumn, when the whole plant is to be pulled up and dried in a shady and airy place for winter use, as has been directed above for Balm.

Besides the uses which we have mentioned in the culinary department, Basil has others attributed to it of a medicinal character. It is said to attenuate viscid phlegm and promote expectoration. The dried leaves reduced to a powder, and used as common snuff, some are wont to consider as more beneficial and less injurious than the narcotic weed of which snuff is made.

BASIL VINEGAR.—Fill a wide-mouthed bottle with fresh green leaves of Sweet Basil, cover them with vinegar, and let them steep for ten days. If you wish to have a very strong essence, strain the liquor, put it on some fresh leaves, and let them steep for fourteen days more. This is a very agreeable addition to sauces, soups, and salad dressings. Dr. Kitchener says, "It is a secret the makers of mock turtle may thank us for telling; a tablespoonful put in when the soup is finished will impregnate a tureen of soup with the Basil and acid flavours, at very small cost, when fresh Basil and Lemons are extravagantly dear."—ROGER ASHPOLE.

NEW BOOKS.

THE PHYTOLOGIST.*

THIS is published monthly, price one shilling, and is devoted to the investigation of British Plants, and a new series commenced in the May of the present year. It contains notes made during Botanical Tours, records of the habitats of British plants, of their times of flowering, history of botanical events, notices of relative publications, and answers to queries. Every collector of British Plants should possess it. The following extract will be evidence that its contents are not all mere technicalities:—

"On Popular Names of Plants.—WAYBRED (not WAYBREAD), the Ancient English Name of *Plantago major*.

"The *Plantago major* bears the above in old herbals, and this name *Waybrede* is by some supposed to imply that the plant has some connection with the staff of life, which is the support of all wayfarers, whether travelling along the highway from cities and towns to villages and hamlets, or jogging along through the occupations, employments, and cares of humanity, to that bourne whence no traveller returns.

"In reference to the first part of the compound term *Waybrede*, there is no difference of opinion among our etymological botanists. 'Waybrede,' says Mr. Fox Talbot, in his 'Etymologies,' 'is an old name for the *Plantain*, a weed which grows very commonly by roadsides in England. But what has it to do with bread? It affords no nourishment of any kind. The German name for it is *Wegetritt*, that is, Way-tread; a good name, because it is trodden underfoot, growing on the hardest roads, etc. I conjecture that the

word *Waybrede* was mistaken by our old herbalists for *Way-tread*, etc.'—Etym. p. 412.

"Dr. Johnston (Bot. Eastern Borders) states that the various terms "*Waybrede*, *Wayfron*, *Weyborn*, *Weybret*," merely express the wayside habit of the plant, which is the child of roadsides and pathways." This is true, but it only accounts for the first half of the name. Mr. Talbot's conjecture, like the conjectures of many others fully as sapient as he, may be readily disposed of by the aid of a few etymological facts which were as accessible to the learned author of the 'Etymologies' as they are to his humble servant, who ventures to help both these learned pundits, to correct the gratuitous conjectural assumption of the one, and to supply the omission of the other.

"First, the term *way* in English is equivalent to *weg* or *weg* in Anglo-Saxon, *teste* Bosworth, on the authority of Ælfrie and Somner. The other part of the term, *brede*, Dr. Johnston might have found among the peasantry of his *ain countrie*, for they still use the form *braid* for *broad*, as *braid clath* for *broad cloth*, *teste* Jamieson. The German name of the plant is *Wegebreit*, or *Wegbreit* (old German, *Wegabreita*), English, *Waybread*; from *breiten* or *ausbreiten*, to dilate, or become, or be broad; *auch das Wegeblatt*, or the *Wayleaf*: *teste* Heyse, Dict. 1828, in voce *Weg*. The Swedish name of the plant is *Groblad*, *great* or *broad leaf*. The Danish name of the same is *Veibred*, from *vei*, a *way*, and *bred*, *broad*."

About two hundred years ago, Parkinson summed up the same in one sentence. "The English name is *Waybrede*, not *Waybread*, as divers corruptly call it." Still earlier, Turner, in his "Herbal," says, "in the north countrie it is called *Waybrede* or *Grete Weybrede*. The lesser kind is called *Sharp Waybred*." Now, of these three different modes of spelling we incline to think the last is the most correct, and that the popular name was intended to refer to the truth that the plant is mostly *bred* by the way-side.

WITHERS' POEMS.*

THE east of England, and its shoemakers in particular, have been distinguished for their poetic powers. In Withers, another is added to the list, and we can recommend his volume as one full of truthful, pleasing descriptions, and tuneful of nothing but good feeling. This is the more worthy of praise when we know that some of them were composed within the walls of a workhouse. The volume was brought to our notice by Mr. Beaton, who received it from one of our correspondents, with a letter, from which this is an extract:

"The enclosed little book was written by a poor man, a cobbler, indeed, in a village close by. I know him well, and, in fact, no one can offer a word to his disparagement. You will find, though entirely a self-taught man, many evidences of the true spirit of poesy in his writings; of course, every allowance must be made for a few mistakes, both grammatically and otherwise. There is one piece, *Tea-Table Talk*, page 128, which I think will amuse and interest you, and a thought has just struck me, that if you approve thereof, and could get it inserted in *THE COTTAGE GARDENER*, it might be the means of selling a few copies, which would be a great benefit to the poor author, and I do think would highly amuse the majority of your readers. The piece, *Cholera*, too, which prevailed in this neighbourhood last year, is well written; the last verse of the poem, dedicated to Mr. Tyson, contains a beautiful sentiment. 'Give us this day our daily bread,' also, is well done. 'A Thing of Beauty is a joy for ever,' the first verse, I fancy, may be applied truthfully to D. Beaton, or I have greatly mistaken my man—

'Tis not alone the song of bard
That's poetry to me,
But things that many disregard,—
The field, the flower, the tree;
And all that's beautiful and bright,
Within this world of our's;
The dewy morning, rosy light,
And evening's silent hours.

"You will be surprised, perhaps, when I tell you that the greater part of these poems were composed in the dark,

* *The Phytologist*: A Botanical Journal. W. Pamplin, 45, Frith Street, Soho Square.

* *Poems upon Various Subjects*. By J. R. Withers, Fordham, Cambridgeshire. Wertheim and Macintosh, Paternoster Row. 2s 6d.

after his wife was gone to bed,—a bit of a termagant, who said she could not afford candle for him to waste. He would actually sit in the dark and think, and retain a verse in his memory until morning, when he would scrawl it down as best he could, and get it re-written and corrected by some person whom he knew.—NEMO."

Mr. Beaton says,—“A friend, to whom I lent the little book, was so much struck by the touching tone of some of the poems, with gleams of true poetic genius peeping out here and there, that she immediately ordered several copies of them.

“‘My Native Village,’ is full of natural feeling, and I was greatly amused with ‘Tea-table Talk;’ and felt much for my favourite flowers who fell under the lash of the stingy old Nettle and Dock-weed, who evidently did not relish the taste of THE COTTAGE GARDENER for certain exotic flowers, against which Miss Nettle and Miss Dock entertain a very different notion from any flower-gardener ever heard of, and

“They mix’d it with scandal as ladies do tea.”

Who, for instance, would have thought any harm of putting Master Crocus in bed with Miss Snowdrop? but that is as nothing compared to the spleen against a host of popular flowers, whose manners and airs they ‘hold up’ to each other, in such a way as made my sides ache again, although the sting was meant for myself, perhaps, for encouraging and suggesting such things. After all, however, there is a good tone and feeling which runs through all these poems, for which I would strongly recommend all persons of good taste and feeling (those, of course, who read THE COTTAGE GARDENER) to order Withers’ Poems, published by Wertheim and Macintosh, Paternoster Row, price 2s. 6d., by which they would be doing a real kindness to a most deserving and very poor labouring man.—D. BEATON.”

[We recommend our readers to buy the book; and every purchaser, we are sure, will acknowledge that the half-crown was well spent.]

QUERIES AND ANSWERS.

GARDENING.

BEES NOT SWARMING.

“What can be the reason my Bees will not swarm? For these three years I have tried my hardest to make them, but they obstinately refuse. They are placed in a convenient bee-house, made of wood, closed in front, but opening at the back with shutters. Early in May they became very crowded and clustered out every warm day until the 9th of July. I then gave them more space with glasses; they took immediate possession, and worked well in them when the weather permitted. I have just taken some very beautiful honey from each. Now, has my bee-house anything to do with their not swarming?”

“I have made many interesting experiments with them, but in this they bother me.—E. FAIRBROTHER.”

[Your Bees not swarming is a result almost above all others that is most desired by amateur apiarians. Had you been so fortunate as to have put your glasses on in May instead of July, you would, in all probability, have had a most abundant harvest of honey. Their not swarming rests with the queen, and not with your bee-house.

Having refused to swarm for three years, they will, in all probability, do the same next year; therefore, give supers to them all at the end of April or beginning of May, and increase your apiary by the purchase of swarms.—J. H. P.]

THE PINE BEETLE.

“A friend of mine has been exceedingly annoyed by a splendid plant of *Pinus insignis* being nearly destroyed by the ravages of a little beetle belonging to the Scolytidæ group. Its plan of destruction seems to be by boring a small hole in the young shoots, and entirely eating all the inside of them. I enclose one of the beetles, and also a little sprig of the plant, and shall feel extremely obliged if you can inform me, in THE COTTAGE GARDENER, any means of destroying this pest, as the tree will, I fear, soon be

destroyed, unless some plan can be found to eradicate the insect.—J. F.”

[The insect sent to us is *Hylesinus piniperda*, of which all that is known will be found in Kollar’s work on destructive insects, page 363. No means have been yet discovered for preventing the ravages of this beetle.]

THE POULTRY CHRONICLE.

THE MANCHESTER AND LIVERPOOL EXHIBITION OF DOMESTIC POULTRY.

ON Thursday, the 6th inst., and following day, the eighth annual meeting of this Society, of which we gave the prize list last week, took place at Saint Helens, Lancashire. Although the number of pens exhibited was not equal to those of last season, it was pretty generally allowed that the quality of the competing poultry showed very rapid progress towards perfection; indeed, in the *Dorkings*, *Hambros*, and *Spanish*, there was little to be desired that was not pretty generally to be found in most of the rival pens. From this cause alone, success in any of these classes was not by any means of easy attainment. The *Geese* and *Ducks* were, likewise, unusually good. In the *Turkeys* but a single pen was shown; these, though very superior, both in plumage and general condition, were far deficient in weight to the prize *Turkeys* we are in these days accustomed to meet with.

All the Poultry was exhibited in the pens known as “Greening’s Exhibition Pen,” and sufficient shelter for any sudden exigence of weather was amply provided for, by the arrangement of the fowls under a very spacious tent. Happily, the two days of exhibition were all that the most anxious of the committee could desire,—the sun shone brightly at intervals, and the pleasures of the meeting were not marred by even a solitary shower. The attendance was necessarily very good; special trains from Liverpool and Manchester, conveying many thousands to the show field; the influx of pedestrians being also unusual. During the first four hours (from public admission) it appears that upwards of four thousand visitors attended, and judging from appearances, the number of sight-seers on the following day did not abate.

As on the like occasion last year, the committee secured the services of Mr. Edward Hewett, of Spark Brook, Birmingham, and Mr. William Lloyd, of Waverham, Cheshire, to award the premiums of the Society. The rewards of this Society being intended to induce attention chiefly to those classes that are either the highest in public estimation for the uses of the table, or notorious for the production of eggs for general market purposes, these varieties were the most prominent in the Exhibition, and very many successful pens changed ownership at high prices; purchasers admitting their astonishment at the general appearance of the improved breeds, when compared with those that for a long series of years had enjoyed the unmolested range of their several homesteads. It was a matter of much congratulation among the committee to find that not a few pens thus disposed of had been raised entirely by cottagers. The sudden receipt of so unusual an amount of capital causing several parties so situated to give vent to their feelings in a manner that produced much merriment among the bystanders, whilst listening to the detail of incongruous articles they contemplated purchasing, and which the exigence of their circumstances had hitherto entirely prohibited. By such additional means, if properly expended, there is not a doubt that some of these individuals will be permanently benefited; nor can it be denied that poultry, when kept in small numbers, are infinitely less susceptible of ailment (of all kinds), than when confined within the costly though less suitable accommodation of many of our leading amateurs.

In the pages of this Journal, we have frequently directed the attention of owners to the thoroughly bad policy of permitting fowls to eat large quantities of dry corn when on the eve of excitement produced by a long journey. At St. Helens, on Thursday, were to be seen several pens of really first-rate poultry, evidently suffering the most extreme

prostration, caused entirely by the indigestible nature of the food with which their crops were "literally crammed." In some of these cases, no doubt, the result will prove fatal to the very existence of the birds themselves, and we are assured by one of the judges, that the success of at least two pens, thus shown, would have proved widely different, had not the birds been evidently in a dying state at the time they were received upon the ground. Amateurs can certainly not give too much care to this particular, which undoubtedly arises in most instances from ill-judged kind-heartedness.

COMPARISONS.

It is said, that at some public schools where show boys are wanted, the master studies the bumps or organs of his scholars, and develops one to the injury of the rest. The favoured lad is a star of the greatest brilliancy on one point, and an idiot in everything else. Sometimes an obstinate examiner will deviate from the point, and confound the poor boy, by showing his talent is of the singular number. Hence, defeat.

So, I petted, fed, and fattened my Dorkings for a recent show, but as their only merit was weight, they were unsuccessful.

Sometimes, in a large school, one of those boys, of whom there are so many, who appear to have no friends to take care of them, who go up with their classes unnoticed, day by day, and pass undistinguished, from half to half, will, at an examination, step out from the ranks and carry all before him.

So, my neighbour, who takes no notice of his fowls, took the prize over my head.

The boys in a school whose kind mammas supply them with comforters and macintoshes, lots of pocket money, and periodical baskets, are never so well as the children of poorer or more sensible parents who allow them to "rough" it.

So, the fowls that live naturally will always beat those that are pampered.

The schoolmaster who has a very stupid boy to educate, dreads the visit of the parents, knowing they will complain of want of progress; but he is often enabled to say—"Have you noticed how well he writes?"

So, when I am rallied on my want of success at a late show, I can answer,—I had a prize for Guinea Fowls, and for Muscovy Ducks.—X.

PEA-FOWL.—BEES.—CANARIES.

I AM a poor country Vicar, Mr. Editor, and in the absence of those luxuries and pleasures which wealth alone can procure, I am well content to beguile my leisure hours by ministering to many bipeds and quadrupeds which are dependent upon me for their daily bread; and no satisfaction can be greater, or pleasure purer, than that which is derived from studying the habits of these good gifts of God to his creature man.

I have an aviary well stocked with Bees. I have an aviary filled with many feathered inhabitants, differing in plumage and in song. I keep Cochins, Gold and Silver Pheasants, Guinea and Pea-fowl. About three of these families I wish to say a word; and, first of the Pea-fowl.

What so ornamental in our gardens as the outspread plumage of the Peacock, when with a dark back-ground of evergreens he expands in the sunlight his glorious train? Who does not admire a Peacock? He excites our admiration when children, and when men, we by no means lose our childish wonder; and yet how the ladies persecute him! If he ventures to breakfast upon the Strawberries, or make his luncheon upon a Fuchsia, or devour the blooms of a *Baronne Prevost* for his dinner, what a rout is made. Oh! that nasty Peacock! resounds from side to side. Well! such was my experience, and I was compelled to incarcerate him in company with three hens in a well-fenced domicile. They had an open yard by day, and a comfortable roost by night. Now, Mr. Editor, comes the curious part of my history.

These three Pea-hens laid forty-nine (49) eggs. I am told no one will believe it, that the Editor of *THE COTTAGE GARDENER* will never allow it to be published, and that if he does, I shall be thought insane; but they *did*; they laid forty-nine eggs, and have deposited ten more in August. I have eighteen young Pea-fowl in excellent health. I did not set all the eggs; but most of those set produced chicken; they were put under Cochins, five being entrusted to each hen, and excellent mothers they have been. The old Pea-hens did not exhibit any desire to sit; the eggs were removed as they were laid. The young Pea-fowl have been fed upon curd made with alum, chopped eggs, and barley-flour paste. I have only lost two; and one of those from an accident; and very proud I am of my flock of eighteen young Pea-fowl.

Next, a word about my Bees. This has been a good season for honey-gathering, in Notts, but there have been few swarms. I have six or seven beautiful glasses of honey, obtained principally from swarms put into hives full of old combs; this I am persuaded is the best way to obtain honey in glasses. Do what you will, you cannot prevent old stocks swarming; ventilate, enlarge, use side-lives or bell-glasses, no matter, they will swarm. I saw a swarm issue from a hive in this parish, which reminded one of the Mamelon Tower, it consisted of four large hives put one upon the other, accessible internally from the top to the bottom, but spite of all they swarmed. My advice to bee-keepers is—and I have kept bees eight years, and tried all manner of experiments—save all the old comb you can; never break any of your boxes; put your swarms into hives full of old comb, and you will have plenty of honey. There are always some stocks that perish in the winter in an extensive apiary. There are always casts and late swarms which do some work, though they perish after. Save all the comb they make, it is invaluable to help the next year's colonies. This is far better than trying to prevent swarming, which you cannot do, and which will always end in disappointment.

And now about the Aviary. In the month of August, 1854, I purchased Canaries, Bullfinches, Goldfinches, Linnet, Siskins, &c., and turned them into a yard seven yards in length, and four in width, with a comfortable roost at the end, which closed with a door, and into which they were driven each night. The sides of the yard were formed of sparrow-proof wire netting, and the top of string netting. All went on well until the middle of October; I then found the Canaries affected by the damp, and removed them to a large, well-lighted, and dry chamber above my stable; the room was cold, the stable being unoccupied; I am not rich enough to keep a horse. During the whole of the extremely cold weather, last winter, the birds had no artificial heat, and were all perfectly healthy, there was not a single death, although there were more than thirty Canaries in the room. The water was frozen morning, noon, and night, and had to be repeatedly thawed. No matter, the birds continued well, and sung away in February as if it had been June; in March I brought them down again to the open aviary, and in due time gave them nests and materials for building. But alas! what a tale of woe have I to unfold; the nests were speedily built, but the Bullfinches eat most of the eggs; and where a Canary sat unusually close, and succeeded in hatching her eggs, they speedily devoured the young ones. I now removed several pairs of Canaries to their winter abode, and in one week the hens were most of them setting, but as they hatched, the cock birds destroyed the young ones, pinching off their beaks, legs, and wings. I now removed the cocks, and left the hens to do all the work; they sat and hatched well enough, but after about three or four days they pined all the young ones to death. What am I to do next spring? Will some kind fancier, with your permission, inform me through your pages?—R. B., *Radcliffe-on-Trent*.

MRS. FORD'S DUCKS.

On several occasions, I have seen it stated in your publication that the Aylesbury Ducks with which I gained the first prize, at different places, were purchased from Mr. H.

D. Davies. This is more than you or any one but myself can answer.

Speaking only of this year, I beg to state, that in my first-prize pen of Aylesbury Ducks, at the Bath and West of England Agricultural Exhibition, held at Tiverton, the drake was the only bird I purchased of Mr. Davis.

At Exeter, none of Mr. Davis's birds were in the first-prize pen, but were in the second-prize pen.

At Anerley, one of Mr. Davis's ducks was in the third-prize pen, and only one drake and a duck in the first-prize.

The weights of the pens of ducks, when they left me, were 22½ lbs., and 22½ lbs., but travelling two days and a night (which the second-prize pen was not subject to), probably diminished much from their weight.—Mrs. B. J. Ford, *Ide, near Exeter.*

MANAGEMENT OF BROODY HENS NOT REQUIRED TO HATCH.

At this period of the year most breeders have many more broody hens than are required, and much trouble is often experienced in curing them of their obstinate desire to sit. I have heard of many most brutal practices having been had recourse to, such as running a quill-feather through both nostrils; another plan, not much less barbarous, is dipping the fowl under water, a practice which is not yet exploded, and which is often followed by the death or violent illness of the bird.

Not long since, I met with a man who told me that he had found out a plan of treating broody hens which was perfectly successful. The air of self-sufficient satisfaction with which this was announced, led me to enquire into the details of the practice, when I was informed that it consisted in cooping the unhappy victim for four days without food, and on liberating her, at the end of that period, the wretch stated that she was a great deal too hungry to think of sitting. Of course, the plan is efficacious in a twofold degree; it at the same time destroys the desire to hatch, and injures, often irremediably, the constitution of the fowl.

Many persons content themselves with constantly turning the hens off the nest, but a Cochins may be turned off many times daily, for six weeks or two months, without being cured. Others coop the hens as soon they show any symptom of broodiness, but they often remain broody for a long time.

The plan that I have found most successful, is to give the hens a few bad, or chalk eggs, and to let them sit steadily for four or five days, feeding them daily with the other sitting hens. At the expiration of that time they are removed from the building in which they have been sitting, and cooped until the desire to return to their nest has passed away. I have usually found that the most obstinate sitters may be conquered in this manner in about a week.

It appears to me, that by allowing the hen to sit steadily for a few days, her ideas of hatching become intimately associated with the particular nest and eggs she is covering; when she is removed for a few days, closely cooped, and the nest destroyed, there is an end of the matter. But if not allowed to sit at all, she still retains obstinately the desire to commence brooding. However, let the explanation be right or wrong, I can testify to the success of the practice.—W. B. TEGETMEIER, *Tottenham.*

IS THE TURTLE DOVE HARDY?

"Is the common Turtle Dove, *Columba turtur*, kept without any great difficulty as an aviary bird during our English winters? I am induced to ask the above question, from noticing one of these birds that has joined my Pigeons for the last ten days, living, feeding, and roosting among them. As it does not appear to be a bird of the year, I presume, from its complete tameness, that a previous winter has been spent in confinement. But with migratory birds, more especially it would be thought of one that leaves us so early in the autumn as the "*Columba turtur*," an English winter must be a trying period under any circumstances.—W."

(We shall be obliged by a reply to this query. We know

one pair of these Doves that are confined in a large cage, or pen, and have lived there more than two years; but they are not left out-of-doors in the winter.—Ed. C. G.)

KEIGHLEY AGRICULTURAL SOCIETY'S POULTRY EXHIBITION.

THIS was held at Keighley, Yorkshire, on the 5th inst.

COCHIN-CHINA HENS AND COCK (BUFF).—First and second, the Rev. George Hustler, Appleton, Tadcaster. Commended.—Mr. William Newsom, Heckmondwike.

COCHIN-CHINA PULLETS AND COCKEREL (BUFF).—First, Rev. George Hustler, Appleton, Tadcaster. Second, Mr. William Newsom, Heckmondwike.

COCHIN-CHINA HENS AND COCK (DARK).—First, Mr. Henry Butler, Shelf, Halifax. Second, Mr. James Dixon, Bradford.

COCHIN-CHINA PULLETS AND COCKEREL (DARK).—First, Mr. Henry Butler, Shelf, Halifax. Second, Mr. James Dixon, Bradford.

COCHIN-CHINA HENS AND COCK (WHITE).—First, Mr. William Dawson, Mirfield. Second, Mr. William Cannan, Bradford.

COCHIN-CHINA PULLETS AND COCKEREL (WHITE).—First, Mr. William Dawson, Mirfield. Second, Mr. Stead Barret, Bowling.

BLACK SPANISH HENS AND COCK.—First, Mr. James Dixon, Bradford. Second, Mr. William Newsom, Heckmondwike. Commended.—Mr. James Utley, Copley Gate, Halifax.

BLACK SPANISH PULLETS AND COCKEREL.—First, Mr. George Stow Colne. Second, Mr. William Newsom, Heckmondwike. Commended.—Mr. James Utley, Copley Gate, Halifax.

CHITTEPRAT HENS AND COCK.—First, Mr. James Dixon, Bradford. Second, Mr. Joseph Hodgson, Hebden Bridge. Commended.—Mr. Wm. Clapham, Bank Newton.

CHITTEPRAT PULLETS AND COCKEREL.—First, Mr. George Taylor, Stanbury. Second, Mr. Henry Sharp, Bradford. Highly Commended.—Mr. William Mitchell, Greenwood's Place. Commended.—Mr. William Clapham, Bank Newton. Mr. James Dixon, Bradford. Mr. William Hartley, Cottingley.

GOLDEN PHEASANT HENS AND COCK.—First, Mr. James Dixon, Bradford. Second, Mr. George Hodgson, Legrams. Commended.—Mr. Joseph Hodgson, Hebden Bridge. Mr. James Dixon, Bradford.

GOLDEN PHEASANT PULLETS AND COCKEREL.—First, Mr. John Bailey, Cross Roads. Second, Mr. James Dixon, Bradford. Highly Commended.—Mr. Ellis Kidd, Exleyhead. Commended.—Mr. Joseph Hidd, Cross Roads.

SILVER PHEASANT HENS AND COCK.—First, Mr. George Hodson, Legrams. Second, Mr. James Dixon, Bradford.

SILVER PHEASANT PULLETS AND COCKEREL.—First, Mr. James Dixon, Bradford. Second, Mr. Abraham Smith, Woodside. Highly Commended.—Mr. Thomas Berry, Sutton. Mr. David Shackleton, Fell Lane. Commended.—Mr. Thomas Hartley, Longlee. Mr. Henry Wood, Legrams.

GOLDEN PHEASANT HENS AND COCK (POLAND).—First, Mr. James Dixon, Bradford. Second, Mr. Wm. Cannan, Eccleshill, Bradford.

GOLDEN PHEASANT PULLETS AND COCKEREL (POLAND).—First, Mr. James Dixon, Bradford. Second, Mr. Frederick Ellerbeck, Shipley.

SILVER PHEASANT HENS AND COCK (POLAND).—First, Mr. William Cannan, Bradford. Second, Mr. James Dixon, Bradford.

SILVER PHEASANT PULLETS AND COCKEREL (POLAND).—First, Mr. James Dixon, Bradford.

BLACK PHEASANT HENS AND COCK.—First, Mr. C. Barrett, Bingley.

BLACK PHEASANT PULLETS AND COCKEREL.—First, Mr. John Town, Colne. Second, Mr. Benjamin Town, Keighley. Commended.—Mr. Christopher Barrett, Bingley.

DORKING HENS AND COCK.—First and second, Rev. Geo. Hustler, Appleton, Tadcaster. Commended.—Edward Ackroyd, Esq., Denton Park. Mr. Charles Batty, Addingham.

DORKING PULLETS AND COCKEREL.—First, Rev. Geo. Hustler, Appleton, Tadcaster. Second, Edward Ackroyd, Esq., Denton Park. Highly Commended.—Mr. David Lister, Ilkley. (White.) Commended.—Mrs. William Spence, Weston, Otley.

GAME HENS AND COCK.—First and second, Mr. Henry Beldon, Eccleshill.

GAME PULLETS AND COCKEREL.—First, Mr. Josephus Kershaw, Clayton. Second, Mr. Ephraim Wright, Legrams. Commended.—Mr. John Barwick, Lees, Cross Roads. Mr. J. Nixon Shoemith, Padiham. Mr. W. F. Fox, Dewsbury.

GOLDEN OR SILVER PHEASANT BANTAM HENS AND COCK.—First, Mr. James Dixon, Bradford. (Silver Pheasant.) Second, T. H. D. Bayley, Esq., Ichwell House, Beds. (Golden Pheasant.)

GOLDEN OR SILVER PHEASANT BANTAM PULLETS AND COCKEREL.—First, Mr. W. C. Greenwood, Rose Cottage. (Golden Pheasant.) Second, Mr. James Dixon, Bradford. (Silver Pheasant.)

BLACK, WHITE, OR GAME BANTAM HENS AND COCK.—First, Mr. James Dixon, Bradford. (Black.) Second, Mr. Walter Duckworth, Addingham. (Black.)

BLACK, WHITE, OR GAME BANTAM PULLETS AND COCKEREL.—First, Mr. Ephraim Wright, Legrams. (White.) Second, Mr. Henry Butler, Shelf, Halifax. (Black.)

DUCKS AND DRAKE.—First, Mr. James Dixon, Bradford. Second, Mr. Emanuel Throup, junior, Threap Royd. Commended.—Mr. Joseph Horne, Keighley. (Aylesbury.) Mr. T. Young, Londesborough Park. (Rouen.) Edward Ackroyd, Esq., Denton Park.

DUCKLINGS.—First, Mr. F. H. Butterfield, Bingley. Second, H. Ambler, Esq., Watkinson Hall. (Aylesbury.) Commended.—Mr. T. Young, Londesborough Park. (Rouen.)

GESE AND GANDER.—First, Henry Ambler, Esq., Watkinson Hall. (Grey Toulouse.) Second, Mrs. Mary Green, Todley.

REVELATIONS FROM BABYLON.

ALTHOUGH not strictly within the scope of our pages, yet the following information is so extremely interesting, and as it will lead, probably, to information relative to the Hanging Gardens of Babylon, we do not hesitate to place it before our readers.

"At a special meeting, in May, of the Bombay branch of the Royal Asiatic Society,

"COLONEL RAWLINSON having been solicited to communicate to the meeting a brief description, *viva voce*, of the results of recent discoveries in Assyria and Babylonia, proceeded to comply with the request. He pointed out, however, at the commencement of his address, that the subject was too large to be handled with effect within the limit of time allowed to him; that it was impossible to follow out an inquiry that involved the restoration of the history of Western Asia from the patriarchal ages to the time of Cyrus in a single hour's discussion; and that he should therefore confine himself to the mere heads of the arguments in general matters, reserving all particular description for those salient points where cuneiform research came in contact with Scripture history, and where the means were thus afforded of illustrating and verifying the inspired writings of the Jews.

"He exhibited on the table a collection of antiquities, which he had lately obtained in Chaldea, Assyria, and Babylonia, since deposited in the British Museum. They were arranged in three different classes, and were intended to illustrate three distinct periods of history. The most ancient class was Chaldean, the second was Assyrian, and the third Babylonian. The Chaldean class consisted of relics found at the primitive capitals of Southern Chaldea, which are now represented by the ruins of *Mugheir* (Ur of the Chaldees), of *Warka* (Erech of Genesis), of *Senkereh* (Easar of Genesis), of *Niffer* (Accad), and the neighbouring sites. Among the relics were stamps of the cuneiform legends impressed on the bricks of the ancient palaces and temples, a number of inscribed cones of baked clay, and a small tablet of black marble, bearing a well preserved legend in the ancient hieratic character; and the period to which the relics belonged was stated to extend from the twentieth to the thirtieth century B.C. In proof of such antiquity, Colonel Rawlinson referred to the brick legends of one of the Chaldean Kings, *Ismi-Dagon* by name, and showed that by a series of dates, fortunately preserved upon the Assyrian monuments, the interval between this monarch and Sennacherib was determined to be above 1150 years, so that the former King must have ascended the throne of Chaldea in the early part of the nineteenth century B.C. But *Ismi-Dagon* was not the first monarch of his line. Relics have been obtained of several of his predecessors, one of whom was named *Kudar-mapula*, "the ravager of Syria," and it was pointed out that this epithet naturally suggested an identity with the Chedorlaomer of Scripture. The latter form indeed seemed to be a corruption of *Kudder-el-Ahmar* or "Kudur the Red," and to refer to the King's Semitic nationality, a conflict of races at that time having pervaded the East, and the Scythian or Cushite aborigines being termed "the black," while the Semitic invaders were distinguished as "the red." It was not thought necessary to follow the primitive Chaldean line in any detail, as the names were throughout unknown in history; but it was stated that a list had been obtained of above twenty of these monarchs from the various ruins on the lower Tigris and Euphrates, and hopes were held out that as materials accumulated, all the names might be classified and con-

nected, if not in a genealogical series, at any rate in a dynastic succession.

"It was next explained that the second class of relics, consisting for the most part of tablets of 'terra cotta,' belonged to the Assyrian period, which extended from the thirteenth century B.C. to the capture of Nineveh in about B.C. 625, and that to this chronological division belonged all those specimens of Assyrian art which had recently attracted the admiration of Europe. There seemed no reason to doubt but that during the long period of Chaldean supremacy, Assyria occupied a very subordinate place in the civil polity of the East. The primeval rulers of the country whose names had been found impressed in rude characters on the bricks of the earliest Northern Capital (now called *Kileh Shergat*), had never assumed the regal title, nor among the territorial epithets which the Chaldean monarchs catalogued on their monuments was the expression 'King of Assyria' to be met with. Works of art anterior to the thirteenth century B.C. were absolutely unknown upon the upper Tigris, and the inference therefore seemed to be that, although the Assyrians had imported from Chaldea in the very earliest times the use of letters and the rudiments of civilisation, the country had not attained to any political consequence, until the Southern Monarchy had ceased to exist. At the same time it was not probable that the Assyrians, like the Persians of a later age, had made a sudden stride from dependence to universal dominion. Of the early kings little had been preserved beyond the names; but we had fortunately the detailed annals of a monarch, named Tiglath-Pileser (the first), who ascended the throne at least 150 years after the foundation of the monarchy, and even at that late period Babylonia had not become subject to Assyria. On the contrary, *Merodach-adanukhi*, the king of Babylonia, contemporary with Tiglath-Pileser I., had, in about B.C. 1110, attained a great victory over the armies of Nineveh, and had carried off the Assyrian gods as trophies to Babylon;—but the Assyrian army, although checked to the south, had already penetrated to the north far beyond the range of Taurus, and to the west to the shores of the Mediterranean. The most interesting result, indeed, which was obtained from the annals of Tiglath-Pileser I., was the light thrown by that monarch's wars in Syria and Asia Minor on the ethnographical distribution of Western Asia in the twelfth century B.C. It appeared at that time that Northern Syria and the great plateau of Anatolia were peopled by Scythian nations, while Southern Syria was dependent upon Egypt (the Casluchim or Khasmonians, who, according to Scripture, were the ancestors of the Philistines, being the dominant tribe), and the Aramean stock was confined to the valleys of the Tigris and Euphrates. The Jews must have been then living under the rule of the Judges, and were probably confounded by the Assyrians with the other scattered Semite colonies, who acknowledged the Khasmonian supremacy.

"The most brilliant period of Jewish history—that is the age of David and Solomon—unfortunately admitted of no illustration from the Assyrian annals. The contemporary monarchs of Nineveh were occupied with the building of cities and the adornment of their palaces and temples, or with expeditions among the northern mountains; but they were hardly yet strong enough to provoke a contest with the organised armies of the kings of Syria. It was at the commencement of the ninth century B.C., shortly after the building of Samaria, that the Assyrians first undertook the subjugation of the countries on the Mediterranean; and from that period to the extinction of the empire, the annals of Nineveh, running in a parallel line with Jewish history, presented a series of notices, which established in the most conclusive manner the authenticity of the Hebrew Scriptures. The geographical names which occurred in the Bible were also found in the inscriptions. The names of the kings of Israel and Judah, of Damascus and of Nineveh, were given in the two independent accounts under the same forms, in the same order of succession, and with the same chronological relations. The same events even were described, with that mere variation of colouring which was due to national feeling."

(To be continued.)

LONDON MARKETS.—SEPTEMBER 17TH.

COVENT GARDEN.

WALL-FRUIT, such as *Peaches* and *Nectarines*, are now to be had in great abundance; but *Apricots* are less plentiful than they have been, and, consequently, we have to note an advance in price. *Grapes* are so abundant, the supply far exceeds the demand; very good *Hambro's* and *Muscadines* may be had at from 1s. 6d. to 3s. per lb. *Plums* of all kinds are a good supply, but *Green Gages* are coming shorter. In *Pears*, we have *Williams' Bonchretien* more abundant and finer than they have been for many years: fruit of good quality may be bought at 3s. the half-sieve. We observe an arrival of that valuable autumn Pear, *Beurre d'Amanlis*, from Guernsey; they are large and handsome. West India *Pines* have disappeared, from which circumstance, leaving the home grown without competition, they have somewhat advanced in price. *Filberts* are abundant. Vegetables are also very plentiful, and the supply of *Scarlet Runners* continues unabated; so great has the crop been, that for the last week they have not been able to command more than 1s. a bushel. *Artichokes* are scarce, and have been so all the season, in consequence of the last severe winter, and the plants not being sufficiently protected.

FRUIT.

Apples, kitchen, per bushel.....	1s. 6d. to 2s. 6d.
" dessert	4s. , 6s.
Pears	4s. , 8s.
Apricots, per doz....	1s. 6d. , 3s.
Peaches, per doz.....	1s. , 3s.
Nectarines, per doz...	1s. , 3s.
Cherries, per lb.	—
Plums, per sieve	4s. , 8s.
Pine-apples, per lb....	6s. , 8s.
Grapes, per lb.	1s. 6d. , 6s.
Melons, each	2s. , 6s.
Figs	—
Gooseberries, per qt.	—
Currants	—
Raspberries	—
Strawberries, per pottle	—
Oranges, per 100	4s. , 10s.
Lemons	6s. , 8s.

VEGETABLES.

Cabbages, per doz. ..	9d. to 1s.
" Red, per doz.	2s. , 4s.
Cauliflowers, per doz.	2s. , 4s.
Broccoli	1s. , 2s.
Savoys	—
Greens, per dozen	—
bunches	2s. , 3s.
Spinach, per sieve....	1s. , 2s.
Peas, per bushel	2s. , 3s.
Beans	—
French Beans, per	—
half sieve	1s. 6d. , 2s. 6d.
Scarlet Runners ..	1s. 6d. , 3s.
Almonds, per lb.	2s. , —
Nuts, Filberts, per	—
100 lbs.	30s. , 40s.
" Cobs, ditto ..	30s. , 40s.
" Barcelona, per	—
bushel	20s. , 22s.
Nuts, Brazil, per	—
bushel	12s. , 14s.

GRAIN AND SEED.

Kent and Essex, red,	—
per qr.	74s. to 84s.
Ditto, white	84s. , 90s.
Norfolk and Suffolk.	76s. , 78s.
Dantzic	86s. , 92s.
Rostock	81s. , 90s.
Odesa	73s. , 76s.
American	83s. , 85s.

BARLEY.

Malting	35s. to 38s.
Grinding and Distil-	—
ling	31s. , 33s.
Chevalier	33s. , 35s.

OATS.

Scotch, feed	31s. to 32s.
English	25s. , 26s.
Irish	24s. , 25s.
Dutch Broo	27s. , 29s.
Danish	25s. , 29s.
Russian	26s. , 29s.

BEANS.

Harrow	41s. to 43s.
Pigeon	42s. , 49s.
Tick	40s. , 42s.

Walnuts, per 1000 ..	9s. , 12s.
Chestnuts	—
Carrots, per bunch ..	4d. , 6d.
Parsnips	—
Beet, per doz.	1s. , 1s. 6d.
Potatoes, per cwt.	3s. , 6s.
Turnips, per bunch ..	2d. , 6d.
Onions, young, per	—
bunch	1d. , 2d.
Leeks, per bunch	2d. , 3d.
Garlic, per lb.	6d. , 8d.
Shallots, per lb.	4d. , 6d.
Horseradish, per	—
bundle	1s. 6d. , 2s. 6d.
Lettuce, Cos, per	—
score	6d. , 1s.
" Cabbage	6d. , 8d.
Endive, per score....	1s. , 1s. 6d.
Celery, per bunch....	8d. , 1s.
Radishes, Turnip, per	—
dozen bunches	1s. , 1s. 6d.
Water Cresses, per	—
dozen bunches	6d. , 9d.
Small Salad, per	—
punnet	2d. , 3d.
Artichokes, each	3d. , —
Asparagus, per bundle	1s. 6d. , 4s.
Sea-kale, per punnet	—
Rhubarb, per bundle	2d. , 6d.
Cucumbers, each	3d. , 8d.
Vegetable Marrow,	—
per dozen	6d. , 1s.
Tomatoes, per punnet	1s. , 2s. 6d.
Mushrooms, per pottle	8d. , 1s.

HERBS.

Basil, per bunch	6d. to 9d.
Marjoram, per bunch	6d. , 9d.
Fennel, per bunch	2d. , 3d.
Savory, per bunch	2d. , 3d.
Thyme, per bunch	2d. , 3d.
Parsley, per bunch ..	2d. , 3d.
Mint, per bunch	4d. , 6d.

PEAS.

Boiling, per qr.	42s. to 47s.
Common	36s. , 38s.
Grey	37s. , 40s.
Maple	40s. , 42s.

SEEDS.

Turnip, White, per	—
bushel	—
Swede	—
Rape	84s. , 86s.
Linseed, sowing	80s. , 83s.
" crushing	70s. , 73s.
Clover, English, red	60s. , 68s.
" Foreign do.	52s. , 57s.
" White	68s. , 73s.
Trefoil	28s. , 32s.
Rye	49s. , 43s.
Tares	—
Canary	59s. , 60s.
Hemp	50s. , 53s.

Linseed Cake, per	—
ton	£11 to £12 10s.
Rape Cake ..	£6 10s. , £6 15s.
Indian Corn	47s. , 50s.

HOPS.

Picking has now generally commenced, and from 5,000 to 6,000 new pockets have reached our market; the quality and colour are fair for first pickings. There has been a moderate demand to supply immediate wants, but the merchants are not disposed to purchase to any extent until the prices become settled, and the supply at market more extensive. Sussex Hops have realised from £4 10s. to £5; Weald of Kents from £4 15s. to £5 5s.

HAY AND STRAW.

Clover, 1st cut per	—	Meadow Hay, new	95s. to 120s.
load	110s. to 147s.	Rowan	—
Clover, new	120s. , 135s.	Straw, flail	30s. , 36s.
Ditto, 2nd cut	90s. , 140s.	Ditto, machine	28s. , 30s.
Meadow Hay	90s. , 135s.		

MEAT.

Beef, inferior, per	—	Mutton, prime	4s. 6d. to 4s. 10d.
8lbs.	3s. 4d. to 3s. 8d.	Veal	3s. 10d. to 4s. 10d.
Do. middling	3s. 10d. to 4s.	Lamb	5s. 4d. to 5s. 10d.
Do. prime	4s. 2d. to 4s. 4d.	Pork, large	3s. 8d. to 4s.
Mutton, inferior	3s. 4d. to 3s. 8d.	Ditto, small	4s. to 4s. 6d.
Do. middling ..	3s. 10d. to 4s. 4d.		

POULTRY.

There has been a slight advance during the past week in the price of Fowls, owing to the demand for one of the Jewish Festivals. It is, however, only temporary.

Large Fowls ..	4s. 6d. to 5s. each.	Grouse	2s. 6d. to 3s. each.
Smaller do.	3s. 6d. to 4s. ,	Leverets	3s. ,
Chickens	2s. to 2s. 6d. ,	Pigeons	7d. to 9d. ,
Geese	6s. to 7s. ,	Rabbits ..	1s. 5d. to 1s. 6d. ,
Ducks	2s. 6d. to 3s. ,	Wild do.	9d. to 10d. ,
Partridges	1s. 6d. to 2s. ,		

PROVISIONS.

BUTTER.—Cwt.		CHEESE.—Cwt.	
Dorset, fine	104s. to 108s.	Cheshire, fine	74s. to 90s.
Do. middling.	90s. , 96s.	Gloucestershire, dble.	70s. , 76s.
Fresh, per doz. lbs.	12s. , 13s.	Ditto, single	60s. , 74s.
Friesland	98s. , 100s.	Somerset	70s. , 76s.
Kiel	94s. , 98s.	Wiltshire, loaf	63s. , 78s.
Carlow	98s. , 102s.	Ditto, double	72s. , 78s.
Waterford	98s. , 102s.	Ditto, thin	54s. , 64s.
Cork	98s. , 102s.	Ditto, pines	72s. , —
Limerick	92s. , 96s.	Berkeley, thin	62s. , 66s.
Sligo	—		

BACON.—Cwt.		HAMS.—Cwt.	
Wiltshire, dried ..	80s. to 84s.	York, new	80s. to 90s.
Waterford	74s. , 76s.	Westmoreland	76s. , 86s.
		Irish	74s. , 84s.

WOOL.

Down Tegs	1s. 2s. to 1s. 3d.	Kent fleeces ..	1s. 1d. , 1s. 2d.
Ditto Tegs and	—	Leicester fleeces...	1s. , 1s. 1d.
Ewes	1s. 1d. to 1s. 2d.	Long, heavy do.	11d. to 1s.
Half-bred Hog-	—	Combing skins ..	10d. to 1s. 1d.
gets	1s. 3d. to 1s. 3d.	Flannel wool ..	1s. 1d. to 1s. 2d.
Do. Wethers	1s. to 1s. 2d.	Blanket wool	6d. to 11d.

TO CORRESPONDENTS.

. We request that no one will write to the departmental writers of THE COTTAGE GARDENER. It gives them unjustifiable trouble and expense. All communications should be addressed "To the Editor of The Cottage Gardener, 20, Paternoster Row, London."

COPY OF No. 68.—One shilling will be sent in return to any direction on the receipt of our 68th number, post free, addressed to S. Whitchurch, Beaumont, Guernsey.

FUCHSIAS WITH WHITE COROLLA (W. C.).—These should be exhibited as light varieties.

BRAHMA POOTRA (Exhibitor).—It is the opinion of Mr. Baily that this variety will become popular; but we are sorry to differ with so good a judge. We estimate them as a very coarse bird, that never will be much esteemed.

NAME OF PLANT (W. L. B.).—Your plant is *Saponaria Calabrica*, the Calabrian Soapwort. It is an Annual, to be sown in April. (R. M.) Best thanks for *Linaria pectorata*. The other two are hardy border plants. The double white flower is *Achillea ptarmica pleno*, and the other is *Spiraea japonica*. (Hamburgensis).—Your trailer is *Campanula fragilis*. We will notice the Muscat next week.

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WEEKLY CALENDAR.

D M	D W	SEPT. 25—OCT. 1, 1855.	WEATHER NEAR LONDON IN 1853.				Sun Rises.	Sun Sets.	Moon R. & S.	Moon's Age.	Clock bf. Sun.	Day of Year.
			Barometer.	Thermo.	Wind.	Rain in Inches.						
25	Tu	Brixton Beauty Moth.	30.300—30.247	61—34	N.	—	52 a 5	52 a 5	rises.	☺	8 13	268
26	W	Arrack Moth.	30.342—30.304	69—34	N.W.	—	53	50	6 a 19	15	8 33	269
27	Th	Green-brindled Crescent Moth.	30.332—30.219	70—33	S.E.	—	55	47	6 34	16	8 54	270
28	F	Plain red Minor Moth.	30.138—30.060	71—33	E.	—	57	45	6 51	17	9 14	271
29	S	MICHAELMAS DAY.	30.106—30.070	76—37	N.E.	—	58	43	7 13	18	9 34	272
30	SUN	17 SUNDAY AFTER TRINITY.	30.159—30.134	75—36	N.	01	60	40	7 40	19	9 53	273
1	M	Bembidium Spencii.	30.222—30.130	67—41	S.W.	01	3 a 6	35 a 5	8 18	20	10 13	274

METEOROLOGY OF THE WEEK.—At Chiswick, from observations during the last twenty-eight years, the average highest and lowest temperatures of these days are 64.4°, and 44.7°, respectively. The greatest heat, 82°, occurred on the 25th, in 1832; and the lowest cold, 24°, on the 27th, in 1828. During the period 89 days were fine, and on 107 rain fell.

ASPLE'NIUM RUTA-MURA'RIA.



THIS is called *ruta-muraria*, or *Wall Rue*, because its young leaves somewhat resemble those of the common Rue, and because, when away from its native mountains it is rarely found growing anywhere but in the mortar on old walls. It is also called *White Maidenhair*, because its full-grown leaves slightly resemble those of the true Maidenhair Fern, and because they have upon their surface a mealy, or glaucous secretion. It is sometimes called the *Rue-leaved Spleenwort*, *White Spleenwort*, and *Tentwort*.

The main, cone-shaped tap root is dark brown, scaly, furnished with black wiry rootlets, and tufted. From the tuft arise the *fronds*, which vary in height from one to four inches. Our cut represents them in both their dwarf and more luxuriant growth. They are most dwarf when growing upon walls, and tallest when

found upon the mountains. Leafstalk green, except quite at its base, and there it is dark brown. About one-half of the stalk naked, and the other half clothed with *leaflets* mostly in threes, and two threes together, the middle branch only being alternately leafleted, and that not always. The leaflets are stout, deep green, wedge-shaped, or partly rhomboid, stalked, spreading horizontally, or slightly drooping, their end blunt, or rounded, and deeply, irregularly notched. The barren leaflets are broader and shorter than those which are fruitful. All have equal-sized veins spreading in a fan form, and extending to the notches or teeth. The *fructification* is in lines on the inner side of the veins, and when ripe is dark brown, but at first covered with a white membrane (*indusium*), which is soon lost as the fructification spreads, runs together, and finally covers the whole underside of the leaflet. The indusium bursts with a jagged edge on the inside; but, as Mr. Charles Johnson observes, this is of small importance in specific distinction unless far more decided than in this instance.

This Fern sends up its new fronds in May and June, and they retain their verdure all the winter. The fructification is ripe in August.

It is found in moist, shady clefts of limestone rocks, and in the crevices of old walls, abundantly in the midland and southern counties, but more rarely in those of the north and east of England. It is a native, also, of most parts of Europe, and from New York to Carolina, in America.

It was known to our earliest herbalists as a native of this country. Thus, Gerarde says, “Stone Rue groweth upon old walls near unto waters, wells, and fountains. I found it upon the wall of Dartford Church, in Kent, hard by the river side, where the people ride through; and also upon the walls of the churchyard of Sittingbourne, in the same county, in the middle of the town, hard by a great lake of water; and also upon the church walls of Rayleigh, in Essex; and in divers other places.” Matthiolus was the first to call it *Ruta muraria*, or rather *Ruta muralis*, and Gerarde names it after him, “Wall Rue, or Rue Maiden-hair,” as well as Stone Rue. Others, says Gerarde, call it “*Salvia vita* (Preserver of Life), but wherefore I know not, neither themselves, if they were living.”

The best mode of raising this Fern, if desired for cultivation, is to collect the spores, or seeds, when ripe in August, and to sow them in a mixture of limey

rubbish and leaf-mould, in a pot under a bell-glass, until the seedlings appear. Keeping it moist, and in a shaded part of the greenhouse. The glass must be removed when the seedlings are up. If attempted to be transplanted from a wall, it can very rarely be done successfully, unless the two bricks between which it is growing can be previously removed, so that the roots may be but slightly injured. The best time for thus moving it is just when it begins to grow in April. Plant it in a soil composed of three parts of rubbly limey-rubbish, one part sand, and one part leaf-mould. The pot must be well-drained, be kept constantly slightly moist, and in the shade. It requires a free exposure to air, which is the cause of its languishing under a Wardian Case.

It is not improbable that the way in which the cone-like main-root of this *Fern tents* or probes between the rocks or bricks where it grows, may have given rise to its old name of *Tent-wort*, which in that case is synonymous with *Probe-wort*. Shakspeare makes use of this now almost obsolete word in more than one passage. Thus, when Hamlet proposes to have "something like the murder of his father" performed before the king, he says—

"I'll observe his looks;
I'll tent him to the quick."

A Meeting of the BRITISH POMOLOGICAL SOCIETY was held at the Rooms, 21, Bedford-street, Covent Garden, on Monday the 17th inst. Mr. Rivers, of Sawbridgworth, in the chair.

There was an excellent exhibition of all sorts of fruits now in season, embracing Peaches, Nectarines, Apricots, Grapes, Figs, Pears, Apples, and Plums, and altogether the meeting was a very agreeable one. The table was completely covered, and the conversation and discussion which took place over every specimen, as it was submitted to the judgment of each individual present, was lively and profitable. We think, at such meetings there is much more good done, and more information obtained, than at those where, for some object of nominal value, growers are excited to rivalry in the production of fruit of colossal dimensions and attractive colour, to the too-frequent exclusion of other and more desirable qualities. In the Pomological Society, the members and their friends meet in social intercourse, and examine, taste, and discuss the merits of each variety of fruit submitted to them; ideas are exchanged, new modes of practice suggested, and altogether these meetings are so agreeable, that one is no sooner over than you begin to weary for the next.

At this meeting, Mr. Snow, of Wrest Park, produced a bunch of a *Black Seedling Muscat Grape*, to which no name has yet been given. It is a hybrid, between the *Muscat of Alexandria* and the *Black Hambro*, and possesses, in a greater degree, the character of the Muscats. The bunch is large, loose, and branching, of considerable length, and the berries are oval; the skin is rather thick and tough, but the flesh is tender, melting, and

juicy, richly flavoured, and with all the aroma of the Muscat. Mr. Snow stated that it ripened with as small an amount of heat as the *Black Hambro*, and was quite as early. As another instance of Mr. Snow's ability in keeping fruits, he presented a dish of *Red Astrachan Apples*, as firm and fresh as if they had just been picked from the tree.

Mr. McEwen, of Arundel Castle, sent some very nice fruit, as he always does; but the most attractive was a collection of *Figs* grown upon standards in the open air, and the fruit was remarkably fine. There were the *Brown Turkey*, *Black Ischia*, and *White Marseilles*; the latter remarkably well-flavoured.

Mr. Whiting, of The Deepdene, near Dorking, had a collection of *Plums*, which consisted of some good specimens of *Royal Hâtive*, *Nectarine*, *Kirke's*, *Cooper's Large*, and *Belgian Purple*; but *Kirke's*, and *Royal Hâtive* were the richest flavoured as dessert varieties. *Belgian Purple*, though good, was inferior to either.

From Mr. Dowling, of Southampton, were specimens of the new *Plums*, *Angelina Burdett*, *Standard of England*, and *Black Gage*. The first is a particularly richly-flavoured and very valuable dessert Plum; the *Black Gage* is also of excellent quality; but the *Standard of England* appeared to us to lack flavour for the dessert. It might be a good variety either for baking or preserving.

Dr. Davies, of Pershore, sent specimens of three varieties of seedling *Plums* raised in that neighbourhood, two of which were called *Jemmy Coombe* and *Jemmy Moore*. The former is an immensely large fruit, much more so than the largest *Pond's Seedling* we have ever seen. It is evidently a seminal variety of the old *Magnum Bonum*, and is of the same colour as that variety; but it was thought to possess a much sweeter and richer flavour. *Jemmy Moore* was a pale red variety, adapted for culinary use, as is also the former.

Mr. Ferme, of Haddington, N. B., sent specimens of a seedling which were not sufficiently ripe, and were, therefore, left over till next meeting; as was also a large collection of Apples and some Pears from Mr. William Barratt, of Wakefield.

Mr. Adams, Nurseryman, Brentford, exhibited specimens of a seedling Plum, which was said to be a very great bearer, and one well-adapted for cooking and preserving.

Mr. Rivers, of Sawbridgworth, produced a large collection of Peaches and Plums, which were particularly interesting, being generally sorts of recent introduction, and which he had been successful in fruiting. They were so numerous it would be impossible for us to find room for a separate notice of each.

The following gentlemen were elected members:—

Mr. George Paul, Cheshunt.

T. Crawshay, Esq., Colney Hatch.

Mr. Snow, Wrest Park, Bedfordshire.

Mr. J. Pearson, Chilwell, Nottingham.

KNYPERSLEY HALL, NEAR CONGLETON.

THE SEAT OF — BATEMAN, ESQ.

LITTLE doubting that the readers of *THE COTTAGE GARDENER* like to hear, occasionally, accounts of new gardens, or of such old ones as possess striking features, I venture to offer the substance of a few notes, taken by myself, a week or two since, on visiting this interesting old place. Such remarks from persons of long experience in gardening affairs, are, I conceive, of much use; and those whose duty it is to advise and to cater for the gardening public, should, certainly, make the best use of their eyes when visiting remarkable gardens.

Knypersley Hall, the subject of the present remarks, is situated about five miles from Congleton, and lies in a district called Biddulph, noted for its collieries; most of them the property of Mr. Bateman.

This seat is bounded on the west by the range of hills known as the Mowcop, the highest point being familiarly termed, by the country people, in their vernacular, "The Old Mon of Mow."

The gardens here are by no means extensive, so that I would not have our readers misled, in that respect, by the account I intend to give of the features, as they appeared to me. It will be remembered, doubtless, that it was the son of this worthy gentleman who first gave the grand impulse to Orchids, by not only pushing their culture with all his energies, but by producing the splendid work on Orchids, so well known to all the gardening world, both at home and abroad.

James Bateman, Esq., the author, after having cultivated this tribe with very great success for a number of years, at last relinquished their culture, sold them all off, and, as I have been informed, built a church with the proceeds. Such, if correct, is not a very common occurrence. Strange to say, he is resuming their culture once more, with that uncommon degree of ardour which it is his bent to throw into everything he takes in hand; and I may here observe, that he has built himself a house, not many miles off, and is engaged in laying out grounds to his own taste; and I venture to prophecy, they will make no small stir when completed. To say anything further, at present, would be premature.

Mr. Bateman, jun. had long amused himself with landscape gardening, for the highest order of which he has a keen appreciation. The mantle of Price seems to have fallen on his shoulders. No tame shrubberies, insipid outlines, or any kind of mannerism may be found in his works. When he copies, it is from the highest school of all—Nature.

I much fear that those who appreciate the beauties of landscape gardening are in a fearful minority, taking the gardening world in the aggregate; I mean those who can admire fine outlines and forms, irrespective of the colouring of flowers. It has been lately observed, that the African savages are great admirers of gaudy colours; and that our Manchester men, who are as wise in their generation as most men, colour their cottons accordingly. I take it, therefore, for granted, that there is a higher order of taste in gardening than the mere decoration of beds with gay Verbenas, Geraniums, Calceolarias, Dahlias, &c.; although I, for one, must confess to as great an admiration of a well-planned parterre as other folks; but, according to the old saying,—“A place for everything, and everything in its place”—a man may be a keen admirer of flowers, without sacrificing one feeling as regards genuine landscape gardening.

But to return to the Knypersley Gardens. What I should call the very best features of the place, bear, in the most unmistakeable way, the impress of Mr. Bateman, junior's, hand. It appears that his respected parent had not been quite so keen a gardener as the son; and, moreover, had other matters to attend to; amongst the rest, territorial improvements, and, doubt-

less, matters connected with his extensive property. There is a piece of water running through the ornamental grounds, the outlines of which must strike the landscape gardener at once. The first impression received was, with me, a kind of surprise, as to how such a variety of combination of water and ground-work could produce such varied and pleasing effects, seeing that the extent is so limited.

But every available principle in landscape gardening, as applicable to this kind of water-scenery, has been called into requisition. In the first place, the outlines of this miniature lake are so powerfully indented, as that any one section or point might be taken for the boundary of a stream in the wilds. Jutting points, or promontories, if I may use the term, like the sudden bends in walks, planned by a good artist, are most of them occupied by some object; and the result is, that your interest is not only kept at every turn alive, but expectations are constantly excited as to what is to come. I think it was Sir Uvedale Price who made the following remark as bearing on insipid outlines—“Who cares to go through a piece of scenery, the component parts of which he can detect the moment he enters!” I speak here merely from memory. And Pope, too:—

“Let not each beauty everywhere be spied,
Where half the skill is decently to hide.”

Indeed, this kind of half-concealment of objects is one of the favourite maxims of the genuine landscape gardener, who also knows how to deal with the straight terrace, or promenade, in its turn, as a direct avowal of art.

On the margin of this little lake, then, Mr. Bateman has created a vast amount of interest; rocks jutting out here, with their tree or bush accompaniments; then bays or recesses, with their heavy shadows, and even cavernous retreats; now and then, a vista opened, through which unexpected matters are seen; and drooping trees, or those adapted to form a cove, or produce fine shadows in the water: such is the general impress of this *multum in parvo* picture.

But, in the exterior walks, a capital lesson is offered to those who like to dive into the minutiae of such matters. As before observed, these gardens are bounded on one side by certain hills, some in Cheshire, some in Staffordshire, and, I believe, even a glimpse of the Derbyshire hills may be obtained—probably the high country between Buxton and Macclesfield. Be that as it may, Mr. Bateman has, in the true spirit of what landscape gardeners term “appropriation,” called in the distant hills, occasionally, to increase the interest of this little picturesque affair.

As you pass along the principal walks, you are all of a sudden surprised, here and there, with a distant view of, perhaps, a score miles or so of some highland, or peak, standing forth in bold relief in the distant sky outline. But this is not all; the landscape gardener has so contrived these vistas, as that you can hardly persuade yourself that any intervening boundary exists between yourself and the highland in question. By ingenious planting as to heights, and by causing the sides of such vistas to creep out, on either side, in a style identical with the distant object, you have a picture so perfectly homogeneous in style and character, that you never for a moment dream of the numerous walls, hedges, and homesteads, which exist between yourself and the distant hills. Such little matters, however light or trifling they may appear in the eyes of observers who have never entered into the spirit of such things, constitute, after all, that charm in gardens, which survives after the floral world is thrown prostrate by the ravages of the stern ice king; and the most ordinary observer feels there is a charm in them, which, although, perhaps, he cannot explain, he can enjoy; albeit, he may sigh in secret for beds of Tulips,

Geraniums, &c. I never saw so much variety given to a small piece of water and its accompaniments before. It is impossible to move a dozen strides, in any direction, but you have a fresh picture—fresh combinations. I have dwelt the longer on this part of the subject, in order to draw attention to what I suppose I may venture to call the picturesque in style, feeling assured, that in the rage for mere modern styles we are in danger of losing our taste for those more natural beauties which give life to the landscape.

Some interesting relics are contained within the cavernous recesses of the rocks, roots, &c., which border this water in places; amongst the rest, stones from some Roman way;—I think I understood the Appian. There are, also, calcined human bones, from the same quarter, sundry Roman tablets, with their superscriptions.

I may here observe, that the gardener, Mr. Sherratt, a young man, from whom I received an unlooked-for amount of civilities, has been eminently successful in transplanting large evergreens. Yews, Hollies, the deciduous Cypress, Laurels, and other evergreens, may be seen here by scores, moved, from eight to twelve feet in height, and of corresponding bulk, and they do not appear to have received the least damage. Mr. Sherratt is an ardent lover of plants for their own sake; and has great success with Orchids, of which he has a nice selection. I may here mention that he has the *Epidendrum*, *Skinneri*, *Laelia superbiens*, *Barkeria spectabilis*, and such miffy things, growing as vigorously as the most luxuriant Orchid I ever saw. It has been supposed, by some, that there would ever exist a necessity for reimporting such things periodically; but one glance at Mr. Sherratt's will speedily disabuse the mind of any one as to this. Mr. Sherratt simply attaches them to naked blocks, or masses of sticks, and suspends them close to the front sashes of a Vinery, where the wind can blow on them occasionally; taking care to syringe them three or four times a day. He thus treats *Vanda cœrulea* also; and, in addition, he winters these things in a common greenhouse, under a temperature little above freezing occasionally. He has a collection of the most choice *Sikkim Rhododendrons*, obtained, I believe, from Mr. Nuttall himself. They have already, I am told, proved a considerable portion of the *Sikkims* to be perfectly hardy.

I must now conclude my report by observing, that Mr. Sherratt has many interesting things which I had not time to take a note of, and that he appears a very persevering gardener.

R. ERRINGTON.

THE LARGEST NURSERY IN THE WORLD.—It has been some years since Rochester has become the head quarters for nurseries in America. From only a few acres in extent, as they existed fifteen or twenty years since, the nurseries within ten miles of the city now cover at least one thousand densely planted acres.

The cost and annual product of these nurseries may be reckoned with some degree of accuracy, by taking as the basis of calculation the estimates of several intelligent nurseryman of that place,—that a *well managed* acre would yield as an annual average from two to three hundred dollars—the expenses varying from fifty to seventy-five per cent of this amount. It would, of course, be greatly controlled by the kind of trees raised, the proportion of ornamentals, &c., but still more by the judgment, energy, and skill exercised by the manager,—for under the direction of some the cost exceeds the profits, and the business, consequently, soon comes to an end.

But it is not our present object to pursue this inquiry, but to give to our readers the results of a few hours personal observation of one of the establishments to

which we have alluded,—namely, that of Ellwanger and Barry, who now have about *two hundred and seventy-five acres* actually occupied with their nurseries. These are not all in one contiguous piece of ground, but are comprised in four principal detached portions, of fifty to a hundred acres each, lying near each other. For extent and perfection combined, there is none in America that nearly approaches this establishment, and we have not been able to ascertain, from satisfactory sources, that there is any in Europe—although there may possibly be a greater number of hands employed in some European nurseries, where labour is cheap and economy not studied.

Ellwanger and Barry had in regular employ, at the time of our visit, over one hundred hands. In the spring they have two or three hundred. Being in the midst of the budding season, they had sixteen active budders at work, with boys to tie after them, and other hands to precede them in preparing the stocks. These, added to such as were occupied in providing the buds, and in removing the ligatures, amounted to about *sixty* in all connected with this department of operations. The buds are all cut by the proprietors themselves, and every pains taken to secure the greatest accuracy throughout this mammoth establishment—about twenty-five thousand buds are inserted daily; and eight persons are required in connection with the persons who cut the buds, to remove the leaves from them on the spot.

They employ twenty-five horses. During all the early part of the season these were all required in cultivating the rows—at present only eighteen are needed for this purpose.

We observed *single fields*, of thirty or forty acres each, out of the many which constituted their establishment, which alone would be regarded as large for an entire nursery. A block of ninety thousand (90,000) Cherry-trees, one year from the bud, was especially noticed for its beautiful growth, most of the trees being already about five feet high, and as even along the tops as if they had been sheared. A half-acre of seedling Pears had as fine a growth as any we have ever seen, although they numbered at least one million. They must be worth, at market prices, more than ten thousand dollars. Two hundred thousand were picked out from them early in the summer, without any sensible diminution of their numbers. As nearly as we could estimate, there were at least two hundred thousand *Norway Firs*, two feet or more in height, and covering many acres.

Their ornamental department is on a very large scale. They have five hundred feet in length of glass propagating houses—seven acres in Roses—and about half-an-acre densely planted with Dahlias. They have a very rare collection of the celebrated new Californian tree, the *Wellingtonia gigantea*, being no less than five thousand fine young plants of this tree, grown from seed collected in California, and which were procured by gathering such as the squirrels had thrown down in their depredations. A year ago, these plants sold for a guinea each—at only one dollar now, here was a space of twenty feet square worth a valuable farm.

In their Grape houses they have over ten thousand Exotic Grapes of fine growth for sale. Their collection of bearing specimen Pear-trees is unequalled in this country—they have from five to six thousand, most of which are handsomely trained pyramids, comprising about four hundred sorts.

In such an immense establishment our readers will naturally suppose there must be a great deal of confusion and much bad growth and bad cultivation. But the reverse is true in a striking degree. An excellent system appears to pervade the whole; and, as many have remarked, they are remarkably successful in all they undertake, from the most delicate hothouse plants, to their vast plantations of large and thrifty fruit-trees.

Indeed, there seems to be a sort of magic in all their attempts at propagation, so rarely are there any failures.

The reason of this remarkable success is their thorough experience and knowledge of the requisites for every operation, and an excellent soil, reduced to the best condition by subsoiling and constant tillage. A weed is a great rarity on their grounds.

The cost of conducting this establishment must of course be very great; although we have no definite information on the subject, we should judge, from the estimates mentioned in an early part of this article, that they must amount to fifty thousand dollars annually. Their sales may be estimated from the same data, remembering that none are more successful; and that probably no nursery is better managed for pecuniary success.

There are several other nurseries at Rochester, of large size, which we were unable to visit; among which, those of H. E. Hooker and Co., Frost and Co., and S. Moulson, are widely celebrated, each containing, as we have been informed, a hundred acres or more.

Since writing the foregoing, Ellwanger and Barry have, at our request, furnished the following statement of the number of acres occupied by each crop on their grounds.

ORNAMENTAL DEPARTMENT, 52 acres, viz:

Evergreens	20 acres
Roses	7 "
Flowering shrubs	6 "
Magnolia seedlings in seed bed, thick ..	1½ "
Miscellaneous trees, specimens, &c.	17½—52

FRUIT DEPARTMENT, 225 acres, viz:

Standard apples	37 acres
Dwarf do.	11 "
Pears	64 "
Cherries	27 "
Plums	12 "
Peaches	18 "
Apricots	3 "
Apple quinces	4 "
Currants	4 "
Gooseberries 4, grapes 4	8 "
Pear seedlings	2 "
Sundries—seedlings, rhubarb, asparagus, raspberries, strawberries, quince stocks, &c., &c.	35—225

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—The Country Gentleman.

SPECIMEN GERANIUMS.

ABOUT this time last year we were deep in the mysteries of preparing Scarlet Geraniums for pyramid specimens. That plan was first brought into the world by Mr. Mc Ewen, of Arundel Gardens, and I never knew or heard of a single individual who did not approve of the plan, if he or she could but carry it out on a proper footing; and, if I recollect rightly, we all agreed that seedlings would make the best pyramids, in every respect; and I know the trial is going on in several good establishments. At the same time, that is, about this time last year, I tried another way of managing, so as to have large specimens of any of the Scarlet breed of Geraniums in the shortest possible time; and no matter whether they were to be bush plants, squat plants, or pyramid plants, the said plan, as I thought, might hasten the time when such plants would be big enough for anything. There is nothing that can be thought of about gardening, but everyone wishes to do, or see done, as soon as possible. To write or talk about a thing that will answer in three or four years, would be enough to hinder such a thing from being tried at all by many people, therefore I shall not say how long it would take

to get a *Tom Thumb* Geranium as big as possible, but now I can safely say that the process can be hastened considerably by the simplest contrivance in the world, without doing any harm to Tom or any of his family, although it may shock the prejudice of a certain class of thinkers, who maintain that all the virtues, or all the goodness, of a plant, are to be found in its leaves.

I have told, last year, that I had the two best grown specimens of *Lady Middleton* Geranium in England, and I still hold to that saying. I have, also, the oldest plant, in a pot, of all the bedding Geraniums, as far as I know; the age of it was given last year, and now it is a year older, and is rather a better specimen than either of the two *Lady Middletons*. This kind is nowhere else, that I know of, except at Shrubland Park, and at Trentham, with Mr. Fleming, and it is one of the dwarfiest growers of all the Scarlet breed, which are not really dwarfs, as *Golden Chain*, *Baron Hugel*, and *Lilliputian*. The name of it is *Lady Caroline Courtenay*. Her ladyship having taken a fancy to the tint of the flower, as a pattern tint for a dress for young ladies, when the flower was a "seedling." These three plants are the only ones worth looking at in my garden; and I risked the experiment on them only, but it answered my purpose so well, that I have a dozen kinds under a similar experiment at this moment, and yet I cannot afford to put up a specimen-house till the war is over. Therefore, whether you like it or no, you need not be the least afraid of hurting any of your plants of this kind by adopting it, and the largest Geranium which is now in any of your beds, or borders, may be as easily prepared to hold on as big as it is without stopping till it is as large as you can make it, or find room for it after it is made.

As to the idea of immense specimens of these bedding Geraniums being used about the front doors, terraces, and other prominent places about the garden, every gardener who had heard of it made the attempt to imitate the fashion, as far as he could, myself among the rest, but my eyes were never properly opened to the advantages of the system, till I saw the collection of them in front of Fulham Palace, belonging to the Bishop of London.

It was more for "Auld Lang Syne," and kind remembrances, that I took to the *Lady Middleton* and *Lady Caroline* Geraniums at first; and I now refer to them, to show how much sooner I might have had good specimens of them if I had adopted the system which I am going to tell you of, and to show you, at the same time, the safety of the plan from my experience of it on my own most favourite plants.

The three plants alluded to were so full of bloom and beauty last September, that I could not find it in my heart to stop them, or cut them down, or otherwise prepare them for the winter, till it was too late, and too dangerous, without artificial heat, to prune them at all for the season; and what did I do, but let them get dry till the leaves drooped, and then I stripped off every leaf all round, and gave no more water till the green, soft parts on the tops of the shoots began to shrivel, then I gave a little water, but not enough to wet one-quarter of the whole ball in the pot. It was sufficient, however, to restore the plumpness in the green parts. This might be about the first week in November, and I recollect, that after this first watering a young leaf burst open, here and there, all over the plants, without any stimulus from artificial heat. I picked these leaves off also. Before Christmas I had to pick them over a second time, but they had only two waterings from the end of October, and, fortunately, I gave them no water in January, before the long frost, and, of course, none after that till it was over. Indeed, it was rather late before they seemed to require any more water, but when they did move, and had water, they soon presented a

spectacle such as I never expected to see, and certainly what I little expected. They broke out all over the surface of the old branches; eight, nine, and ten years old wood, on *Lady Caroline*, burst into leaf as if every shoot was a seedling of last autumn.

I was not in a great hurry to rub this growth off, for I take it that it served me in two ways; first, by not allowing the rise of the sap to push the points of the shoots too soon for me in the season, and yet prepared an active circulation in all parts of the plant before the final plunge into the depth of the experiment, which was, shaking these plants entirely and altogether out of every particle of soil on the 1st of March as if it were the month of August, and the plants previously cut down. There was no cutting of the tops, or roots, but all the small roots were dead, and gone with the dusty mould. I had to squeeze the big roots to get them into such small pots as I thought necessary; after that, they went on as well as any plants ever did, and they had two more shifts before the end of May, when they came into bloom, and they have bloomed most profusely to this very day.

Lady Caroline, which is the oldest plant, had the roots on one side in a weakly state, which I did not much like; but a lighter compost, and a smaller pot, I thought would bring it round, and I mention this particularly, and put much stress on it, because it did not bring it about, and I was deceived. When ten years old roots of a Geranium get out of health they are not so easily got round as one might think; and as I hold it, that any of this Scarlet breed is a better plant to flower the older it is, it is essential that the state of the roots should be examined every year after the first seven years are over; before that, I think that Harry More's plan of not potting them every year, is decidedly the best; but this case of *Lady Caroline* has changed me so far as to make a break in Harry's plan at the seventh year, or sooner, if the plant shows any bad symptoms, and after that to repot strong kinds every second year, and all the delicate and dwarf growers, like the *Lady Caroline*, to be potted every year; not in the autumn, as we practice now, but about the middle of February, where a little extra heat could be given them; or as late as you can keep them from leafing, where no artificial stimulus can be given, to meet the check of turning-out at such an unusual season.

About the end of April the leaves of *Lady Caroline* looked bad, and I saw that something must be done with the roots. I shook them out again, and found that only two of the old fanged roots had put out strong fibres; the rest of them were not looking particularly out of order, but rather sluggish and out of tune. I then cut them back to different lengths to sound, healthy parts, and returned the plant to the same pot, using a kind of light compost. This had the desired effect, and shows that the roots ought to be cut to sound wood at the first turning out in March, which would have been more dangerous in its turn, in my case, as I had no means of giving my plant any extra heat so early. As I meant to keep this plant of *Lady Caroline* as long as I live, I confess I was rather afraid of it after operating on the roots, and as soon as the earth was warm enough for it, early in June, I planted it out of the pot in very good soil, and a warm, sheltered place, and now it looks as well as it did when three years old. All its leaves will be picked off by the end of this month, and the young growth will be so hardened by that process that I am not at all apprehensive of its sustaining any injury this winter from being transferred to a pot so late in the season. That time will depend on when the frost appears; the two plants of *Lady Middleton* will have their leaves taken off again by the end of October, but there will be no more cutting till the shoots are as long as I can find room for. In short,

there does not seem the slightest reason for ever stopping one of the breed till it is full size, if you strip it of all its leaves every autumn, and so prepare it to hold its softest parts against the severity of the longest winter, and also to furnish more fresh shoots at the next growth than you can find room for training.

Such is my firm belief from the experience of the last twelve months; the thing is of great import to such as wish for large specimens of this class of Geraniums, and who are not burdened with hothouses and hot-headed gardeners.

Some of my other pet Geraniums have been twice cropped already this autumn, and although I cannot affirm that the process will save them from damping or dying off at the points, if I keep them dry without pots all the winter, I have a strong opinion on the merits of the system, when the plants are wintered in pots, and in as cool and dry a place as will save them from actual frost. Then we may obtain full-sized specimens much sooner by planting them out-of-doors for the first three years, and when we accustom them to pot culture, the long rest from October to March, and more especially by shaking them out of the pots in March, instead of in the autumn, we save winter coddling, and improve them at the same time.

D. BEATON.

TONGUES IN TREES.—Nice observers of nature have remarked the variety of tones yielded by trees when played upon by the wind. Mrs. Hemans once asked Sir Walter Scott if he had noticed that every tree gives out its peculiar sound? "Yes," said he, "I have; and I think something might be done by the union of poetry and music to imitate those voices, giving a different measure to the Oak, the Pine, the Willow, etc. There is a Highland air of somewhat similar character, called the "Notes of the Sea-Birds." In Henry Taylor's drama, "Edwin the Fair," there are some pleasing lines, where the wind is feigned to feel the want of a voice, and to woo the trees to give him one. He applied to several; but the wanderer rested with the Pine, because her voice was constant, soft, and lowly deep; and he welcomed in her a mild memorial of the ocean cave, his birth-place. There is a fine description of the storm in "Coningsby," where a sylvan language is made to swell the diapason of the tempest. "The wind howled; the branches of the forest stirred, and sent forth sounds like an incantation. Soon might be distinguished the various voices of the mighty trees, as they expressed their terror or their agony. The Oak roared, the Beech shrieked, the Elm sent forth its long, deep groan, while ever and anon, amid a momentary pause, the passion of the Ash was heard in moans of thrilling anguish."—*The Country Gentleman*.

ORNAMENTAL PLANTS FOR A LOBBY, THROUGHOUT THE YEAR.

"R. C. (a Subscriber) will feel much obliged to THE COTTAGE GARDENER for a list of plants recommended to stock an entrance lobby, capable of holding from three to three-and-a-half dozen pots, throughout the greater part of the year. A greenhouse, with moderate heat, is available to bring on plants in succession. The entrance to the house being through the lobby is against tender plants."

According to the plan, so very properly sent, it appears that the entrance is on the east side of the lobby, and occupies fully one-half of that side; the west side is a dead wall; the north side, with the exception of a door opening into the hall, is all glass; but whether that glass division is for seeing the plants from the hall, or

getting additional light from that hall, though in a subdued form, the data leave uncertain. The whole of the south side of the lobby is of glass. Along this south side, with the exception of a fourth of the space near the entrance, and along the west side, but some distance from it, the stands for a double row of plants are arranged so as to make the end and the side of an oblong parallelogram. The stand seems to be placed at an equal distance from the glass on the south side, and the dead wall on the west side. The keeping these a little distance from the wall is of importance, both in an economical and phytological point of view. Whether that simple arrangement is the best possible in the circumstances, I may allude to before I close this article. As plants are wanted throughout the most of the year, I presume the lobby is heated by a stove, or other means; if by a cast-iron stove—Arnot's, or otherwise—it will be advisable to have a tin to fit the top, and to keep that supplied with water whenever there is a fire. I presume the glass on the south side is made to open and shut, so that air may be given judiciously in winter, and be let in almost constantly, night and day, from June to October. For such a place, provided the door is not always left open during the day, almost any plants would do, provided they did not stand too long, and, in addition to changing their position, all hard-wooded plants were kept at the south side. Knowing, however, how easily hard-wooded plants are injured in such places, I would recommend furnishing it almost entirely with soft-wooded plants that are intended to be kept for a time, and then either cut down or thrown away. All permanent plants should have the most southerly position, in order to have the full benefit of light and air. Camellias, Epacrises, and Azaleas, &c., will bloom very well in such a place, but they must not be kept too long at the north end, even though the doing so would keep them much longer in bloom. Keeping these things in view, I will hastily mention a few things for the separate months, beginning with the present.

SEPTEMBER.

Fuchsias would make a fine show of themselves. With the exception of a few large ones, those propagated in March and April would be most suitable for this purpose. *Balsams*, sown in April, May, and June, would keep a succession to the middle of October. *Cockscombs*, sown in April, in a hotbed, and grown on, would also be good now. *Lantanas*, struck in spring, would also be gay in the present and the previous month, and most people admire the changing of the colour in the flowers. All the late flowering *Gladioli*, such as *Pscittacinus*, *Natalensis*, *Gandavensis*, &c., would make a fine show; and so would the Japan Lilies, as *rubrum*, *speciosum*, &c. *Scarlet Geraniums*, of various kinds, would also be very suitable, and spring-propagated plants of many of the fancy and florists' *Pelargoniums*, plants of *Achimenes*, started in May, will now also be very suitable, with nothing more than greenhouse treatment on coming into bloom. On the second row from the south side, or about mid-way to the north on the west side, the *Gesnera zebrina* would be a fine object for this month and a half of the next. Plants should have been started in March, in heat, and hardened off, and grown in a shady place in the greenhouse. In addition to these, I may mention as very appropriate, *Begonia parvifolia*, *Begonia Evansiana*, *Salvia splendens*, and *Plumbago capensis*, the treatment of which has been fully given; the *Plumbago* should have been cut down in March, and kept close until it broke. Small plants, from cuttings in spring, would now also be interesting. All the little *Lobelias* would look interesting hanging over the first one.

OCTOBER.

A good deal the same as the above. Small plants of Tea and Bourbon *Roses* will be coming into bloom a second time. *Salvia splendens*, and other kinds will be useful. The variegated, and even the plain-leaved *Ageratum* will supply a greyish-blue colour. Shrubby *Calceolarias* and *Heliotropes* propagate in spring. *Mignonette* and *Virginian stock*, sown in June and July, and towards the end of the month. *Chrysanthemum Hendersonii*, and various of the *Pompones Chrysanthemums*. A double yellow *Chrysanthemum*, saved from the annual kind, is getting very plentiful, and by propagating in June will bloom in pots all the autumn and winter. The scent of such things must be neutralised by *Mignonette*, &c.

NOVEMBER.

Nothing could be more gay than the *Pompones* and other *Chrysanthemums* during this month. See what was lately said of making stands of them. I forgot then to add, that plants of the small *Lobelias*, sown or propagated in June and July, make fine edgings for such stands. *Chinese Primroses* will also now be good, and young plants of *Fuchsia serratifolia* would look well; and so would the *Salvia splendens*, its scarlet lightening up the different coloured *Chrysanthemums*.

DECEMBER.

This will be the darkest and worst month of the year. *Chinese Primroses* will now be good. *Violets* in pots, the sweet *Daphne odora*; *Wall-flowers*, sown in spring, pricked out and potted early. *Scarlet Geraniums*, and early *Cinerarias*. *Mignonette* will make the place sweet. *Camellias* will also be coming in. *Salvia fulgens*, potted by August, will bloom all the winter. *Crocus*, &c.

JANUARY.

Here, again, *Camellias* must form the chief attraction, and to them may be added *Musk*, slightly forced. The sweet *Daphne*, *Cyclamens*, *Crocuses*, *Snowdrops*, *Violets*, *Wall-flowers*, *Primroses*, *Cinerarias*, and *Coronilla glauca*, *Cytisus proliferus*, and *racemosus*, the two latter having been kept in a warm part of the greenhouse.

FEBRUARY.

Much the same as in January. *Camellias*, *Chinese* and *Bourbon Roses*, *Cytisus*, *Narcissus*, *Tulips*, and *Hyacinths*, from bulbs potted early, and slightly forced before being hardened off in the greenhouse, before being brought to the lobby. Well-grown plants of *Wall-flowers* would also be very interesting during this month, if kept in the greenhouse in winter. They will now be in full bloom, and so will some of the double ones towards the end of the month. Annuals sown in September, such as the various *Nemophilas*, potted off, and kept on shelves, will be very beautiful by the end of the month. To succeed them, those sown in the open air in autumn may be taken up and potted at the end of the month.

MARCH.

In addition to *Camellias*, bulbs will make the greatest attraction. *Hyacinths*, with the assistance of a hotbed before placing them in the greenhouse. *Narcissus*, of such kinds as *Grand Monarch*, *Paper White*, *States General*, *Soleil d'or*, and *Double Roman*. Of *Tulips*, *Tourne Sol*, *Double Yellow*, *Rex rubrorum*, and *Royal Standard*, *Van Thol*, &c. *Cinerarias* will also be coming in, and small plants of Tea and China *Roses*. *Scarlet Geraniums*, in pots so small as to stunt the plants, will also be coming into bloom. A few *Epacrises* would stand a month at the south side without injury, provided the atmosphere was not still and dry. Various *Cytisuses*, and especially *Attleana*, will now also be in

bloom, and they suffer but little in such places, as the out-door treatment in summer revives them. The beautiful golden *Acacia armata* will also stand a considerable amount of shade uninjured.

APRIL.

Bulbs, Roses, Primroses, Cinerarias, Scarlet Geraniums, Wall-flowers, and hardy Annuals, sown in September, must now form the chief supply of soft-wooded plants. The annuals most suitable are the *Nemophilas*, the *Collinsias*, the *Candytufts*, the *Silenes*, and *Viscarias*. Early *Azaleas* will now be coming of their own accord, in the greenhouse, but should not stand in such a lobby above a fortnight, unless at the south side. Plenty of *Mignonette* and a few plants of *Heliotrope* will make a nosegay.

MAY.

The chief gems will be *Azaleas*, but these must be cared for. Herbaceous *Calceolarias* alone, from seeds sown in August, would make a fine show this month. Shrubby ones potted in autumn and winter also make a fine display. *Cinerarias* will be at their best; Scarlet *Geraniums* good; and in addition to the Annuals mentioned, fine plants may soon be in bloom of the various *Schizanthuses*, from seeds sown in September, pricked off into pots, when up, and kept free from frost, but otherwise cool, and rather dry in winter, and potted off into six or eight-inch pots in the beginning of March.

JUNE.

For the first part of the month such annuals as the *Schizanthus* would be graceful and fine. *Azaleas* would do well about the middle of the stage, and keep a long time in bloom; but that must not entice you to keep them there more than a fortnight; they are too valuable to be injured merely for the bloom. All kinds of *Geraniums* will now be in their glory. The *Cactus* tribe would also keep longer in bloom than in a lighter house, and there will be enough of time to give plenty of unobstructed light afterwards. *Balsams* sown in a hotbed at the end of February, potted and hardened off by degrees, will also now be fully in bloom, and will keep in perfection longer in such a place than they would in a greenhouse, though they will not seed so well. *Fuchsias* of last year, cut down, or pruned in, and started in February, will also now be in full feather, so that in this month there will be abundance of soft-wooded plants to choose from.

JULY.

The same may be said of this month. If there is a Cucumber-bed, or pit, in addition to the greenhouse, *Cockscombs* may be had. Many are still partial to this good, old-fashioned plant. With such a hotbed, *Achimenes* may be also had good from the middle of the month and onwards, and they would quite enjoy the comparative shade of such a place when in bloom. This and the two following months *Fuchsias* will be in perfection; and with *Geraniums*, *Lobelias*, &c., nothing more could well be wanting. The hardier *Begonias* will also do well, and last year's plants of *Lantana crocea* and *mutabilis* cut down early in spring and grown on.

AUGUST.

Varieties of Scarlet *Geraniums*, young plants of *Cassia corymbosa*, fancy and florists' *Pelargoniums*, still remaining, two or three plants of Rollison's *Unique* Geranium, *Balsams*, *Fuchsias*, and *Achimenes*, could leave little in the way of floral display to be desired during this month. With a few yellows, such as the *Cassia*, or even Yellow *Calceolarias*, and some blues, as *Salvia patens*, or the *Achimenes longifolia major*, and Scarlet *Geraniums*, *Balsams*, and *Fuchsias*, would supply pretty well all other colours.

R. FISH.

(To be continued.)

MR. WEBB OF BABRAHAM.—The Emperor of the French has been graciously pleased to honour Mr. Jonas Webb, of Babraham, with a testimony of his regard, in the shape of a splendid silver candelabrum, as an instance of his Imperial Majesty's appreciation of the success which has attended Mr. Webb's endeavours to improve the breed of sheep.

WOODCRAFT.

FENCES.—In addition to pruning and weeding forest-lands, which I have already endeavoured to prove, it is a wise economy to attend to at this season of the year; it is, also, necessary to see that the fences are in good repair, especially such as enclose young plantations. If these are out of repair, and a bevy of oxen, or cows, or horses, get in, the mischief they will do in feeding upon the young tops of the trees (of which they are very fond) is incalculable. It is very annoying to the owner, after being at the expense to prepare the ground, plant the trees, pruning them properly, and keeping them clear of weeds, to find that, by neglecting to keep the fences in good repair, cattle have got in, and eaten off the leading shoots that are so indispensable to form fine, straight timber in the shortest time. It is true, Nature will make efforts to repair this almost unpardonable negligence, by causing the trees so deprived of their leaders to send forth new ones; but it is almost always the case that three or four, or, perhaps, more leaders, spring from such denuded trees, rendering further labour necessary to reduce the number of leaders to one, thus wasting the energies of the tree, besides losing a year's growth. The Coniferous tribe, indeed, scarcely ever make new leaders, and the only way to obtain one is to tie up one of the side branches of the next tier of shoots to a stick securely fastened either in the ground or to the lower part of the tree itself, the stick projecting high enough above the tree to set up a side-shoot for a leader. The rest of the branches of that tier it will be necessary to prune away, in order to throw strength into the one selected to repair the loss of the original and real leading shoot.

At this season of the year the trees have made their summer shoots, and, therefore, it is peculiarly necessary now to prevent the mischief cattle would do by eating off the young tops, to see that the fences are cattle-proof. All the annoyance, expense, and labour, to repair the mischief would then be avoided.

It may be asked, what is the best fence for keeping out cattle, and how should it be made? I answer, the very best is a hedge of our hardy, beautiful *Holly*; but the difficulty with it is, that it is, for two or three years after planting, very slow of growth. In some districts it grows quickly enough, showing that it requires a peculiar soil. That peculiarity consists in its being a deep loam, mixed with small stones, on a rocky subsoil. The best way to get a good fence of *Holly*, is to grow the plants in a nursery of good soil, till they are large enough to form a good fence at once. The *Holly* has numerous fibrous roots naturally, and they may be increased by frequent shiftings in the nursery, say every third year. What I would do to prepare *Hollies* for a hedge would be, first, to prepare the ground by deep trenching and enriching it with manure;—then procure plants not more than a foot high, plant them in rows two feet apart, and one foot from plant to plant in the rows. The first year after planting they would require no further care, except keeping them clear of weeds during the summer,—and in the autumn, forking over the ground, to allow the rains and frosts of winter to ameliorate and enrich the soil. The spring following, I would go over the plot with a sharp knife, and cut in

all projecting branches in a straight line, so as to form them into a fence-like form. Should any plant be running up with a single stem, that stem should be shortened-in to produce many stems, and thus thicken the future hedge. This hoeing, digging, and pruning to be continued, year after year, till the plants are from three to four feet higher; which, probably, would require five years to accomplish. Then the year preceding their removal, open a trench, with a narrow spade, down the centre between the rows, deep enough to reach the lowest roots. With a sharp knife cut in all the strong roots, make the soil fine, and replace it in the trench. Such a root-pruning would cause quite a wig of fibres to each plant.

Whilst these small roots are forming, the ground where the hedge is to be planted should be prepared for its reception. Remembering the sort of soil and sub-soil the Holly thrives best in, endeavour to make the ground similar. If low and wet, dig a space two feet wide; and then form a ditch eighteen inches wide on each side, throwing the soil on the space where the hedge is to be planted. This will raise it and drain it at the same time. It should be done so long before as to get mellow and well pulverized by the time of planting.

TRANSPLANTING EVERGREENS.—It was a matter of grave dispute,—When is the best time to remove evergreens? I am an advocate for early autumn-planting; though with well-prepared plants, growing near where they are to be removed to, my practice warrants me in saying, they may be safely removed, in favourable weather, any time from the beginning of October to the end of April. I have moved large evergreens successfully in the depth of winter, during a dry season; but if I had the choice, I would prefer October to any month in the year. The time having arrived, then, let one man open a trench in the centre of the raised bank, and others open another on the outside of the outermost row of the plants, rather deeper than the deepest roots. Let a man thrust a spade down about eight inches to a foot on the inner side of the row, pressing the soil and roots outwards. It will be found, then, that every plant will come up with a large, solid, compact ball of roots. If the place to be fenced in is no great distance, then two men might carry as many plants as they could on a hand-barrow, which would not shake the balls; the best of any mode of conveyance; but if the place is a considerable distance, then a cart, or waggon on springs, would be the next best carriage. The plants should be carefully lifted into that carriage, the balls packed close to each other, and the plants set upright. On arriving at their destination, the trench being ready to receive them, lift them carefully out of the carriage, and set them one by one in the trench, just deep enough to allow the roots to be covered two inches with the soil. This planting should be done rapidly, so as to expose the roots to the dry air as little as possible. When all are planted, and the weather dry, a good watering should be given; and, in order to keep the plants steady, some stout stakes should be driven in, six or seven feet apart; then tie firmly to them two rods, one near the top of the stakes, and the other about half way from the ground. To these rods tie each plant firmly also. It is evident no ordinary cause could then shake or blow down the hedge. Lastly, to keep the roots in an even state of moisture, cover the top of the bank with two inches of short, littery stable manure, which completes the planting.

The advantages of this mode of forming a Holly hedge are manifold. In the first place, it is a fence at once, requiring no protection of posts and rails. In the next place, it is certain to grow, and is not so liable to be destroyed by hares and rabbits,—great enemies to the thriving of small Holly plants, by nibbling off the bark round the main stems, as well as mincing off the ends

of the young shoots. This certainty of a good fence at once, and the great saving of a fence for the fence rewards the hedger for all his patience and trouble.

T. APPLEBY.

(To be continued.)

THE ORANGE TRIBE.

(Continued from page 426.)

PROPAGATION.—Having, in my former papers on this useful and beautiful tribe of plants, given a few remarks on their desirableness in culture, and a list of the various species and varieties, I now proceed to give a few directions how to increase them. The two great qualities indispensable to the successful propagator are, patience, and unremitting after-attention, together with a knowledge of the best time to put in his cuttings, buds, or grafts, and the proper age of such cuttings, &c. Experience can only lead to the successful application of such knowledge, or to apply and use instructions from such persons as possess such knowledge.

I have, in my mind's eye, the most successful propagator in Great Britain; nay, if I was to say in the whole world, I should not over-rate his ability, and I gladly take this opportunity to bear testimony to his uncommon success as a propagator for nearly half-a-century, and also to his worth as a man. I mean Mr. Fancourt, the propagator for Messrs. Henderson, at Pine-Apple Place, in whose service he has been nearly forty years, during which long period he has done nothing else but propagate plants, more especially Heaths and New Holland plants, with unvarying success; I may venture to state that he has propagated millions of these plants. He is now the father of propagators, being, I believe, the oldest living; yet his powers and success are unabated. Great numbers of propagators, both English and foreign, have to thank Mr. Fancourt for the knowledge he has imparted to them. With all this success and merit, a more unassuming, worthy man I do not know. He has a son, that I am happy to state is following his father's example, and bids fair to be equally successful. I trust the readers of *THE COTTAGE GARDENER* will excuse this short digression, in bearing testimony to the ability and character of Mr. Fancourt. Writing on propagation naturally brought him to my recollection, and many readers that are in the trade will agree with me in my estimate of his worth. To them his success is well-known, though out of the trade (I mean nurserymen) he is almost unknown. May he long continue to be the father of the profession.

All the varieties of the Orange tribe are propagated by seeds, cuttings, layers, budding, and grafting, on each of which modes I will give a few brief directions.

By Seeds.—I have already remarked, that in this country, to raise seedlings in order to improve known varieties would not be worth the time and attention necessary for success. Even in Italy seedlings do not fruit till they are eight or ten years old, or even older. An instance is recorded of a fine tree, twenty-five years old, that had not blossomed at that age. Yet, if an amateur is desirous of attempting this always desirable object, he should select seeds from the largest, best-flavoured, and finest-formed fruit, with the thinnest rind. We might also impregnate different kinds with others possessing qualities desirable to introduce into the progeny. It is my opinion, and has been the opinion of other writers on this particular point, that the so-called species would intermix with each other. Assuming that to be true, the improver might mix the large Citron, or Shaddock, with the best Orange, and thus reasonably hope to produce sweet Oranges approaching to the size of the Shaddock, which would be a great improvement.

Having obtained seeds—whether improved or from old varieties—clean them out from the pulp, dry them, and put the seeds in paper bags away in a drawer, in a dry room, till wanted. In March, prepare a hotbed of dung, or tan, and when the heat is moderated and sweet, sow the seeds in pots filled with sandy loam and leaf-mould, in equal parts, cover them an inch deep, and plunge the pots in the hotbed; keep the soil moist, and give air every day; but most when the sun shines. The seeds will soon germinate, and when three or four inches high the plants should be potted off. Prepare a sufficient quantity of good turfy loam, adding about one-fourth of two years' old, well-decomposed cow-dung. Mix these well together, and put the compost in a place where it will become moderately dry and warm. Then choose a sufficient number of pots, four or five inches diameter; let them be clean, dry, and warm; drain them well, and fill them half-full of the prepared soil; pressing it down moderately firm. When these are all ready, turn out the ball of earth with the seedlings growing in it, separate them from each other carefully, and, if possible, without bruising or breaking a single root. Place one in the centre of each fresh pot, and fill in around it the fresh soil, working it in amongst the roots, and shaking it down by striking the pot smartly two or three times on the bench. Finish, by leaving about half-an-inch space below the rim to hold water. When all are potted, give a good watering, to settle the soil and moisten it thoroughly. While the potting is going on, let the hotbed be shaken up, and if the heat is much spent add a little well-tempered sweet dung, or tan, to revive it. Then replunge the pots, shading the plants daily when the sun shines, and giving plenty of air to cause the plants to grow stout and strong.

With this generous treatment, and plentiful supplies of water when they need it, the plants will grow quickly, and by the middle of summer will be two feet or more high, and strong in proportion. Then, on cloudy days, draw off the lights, and gradually harden them to bear full exposure. Remove them into the greenhouse, placing them as near the glass as possible, and shade from powerful sunshine, always watering freely, for the Orange tribe require a plentiful supply of moisture. In winter, give less water, and keep the plants from frost. Repot in the spring, and keep the young trees in the greenhouse, year after year, till they flower and fruit. Should any be improved either in size, flavour, or free bearing, such should be carefully preserved and propagated. All the others will answer admirably as stocks for budding or grafting.

T. APPLEBY.

(To be continued.)

GARDENING FOR THE MANY.—OCTOBER.

GENERAL REMARKS.—It is somewhat to be regretted that parties who always reside in the country, or where they have gardens, become careless of their appearance as the autumn approaches. The mind becoming satiated, as it were, with the varied productions of the last five months, is too apt to look with indifference on what is now presented to it, unless the individual be an enthusiast in horticulture; in which case, the last Dahlia spared by the frost will be attractive; nay, it is very likely that the iron king will be arrested in his destructive career, by some covering put over the cultivator's pet flowers, and a lengthened autumnal bloom secured. Be this as it may, it is certainly to be regretted that in many instances the latter part of the season is not regarded with so much interest as the many attractions now present entitle it to be. A sojourn in a town, or by the sea-side, seldom fails to revive the desire for flowers, which a continuous intercourse with them

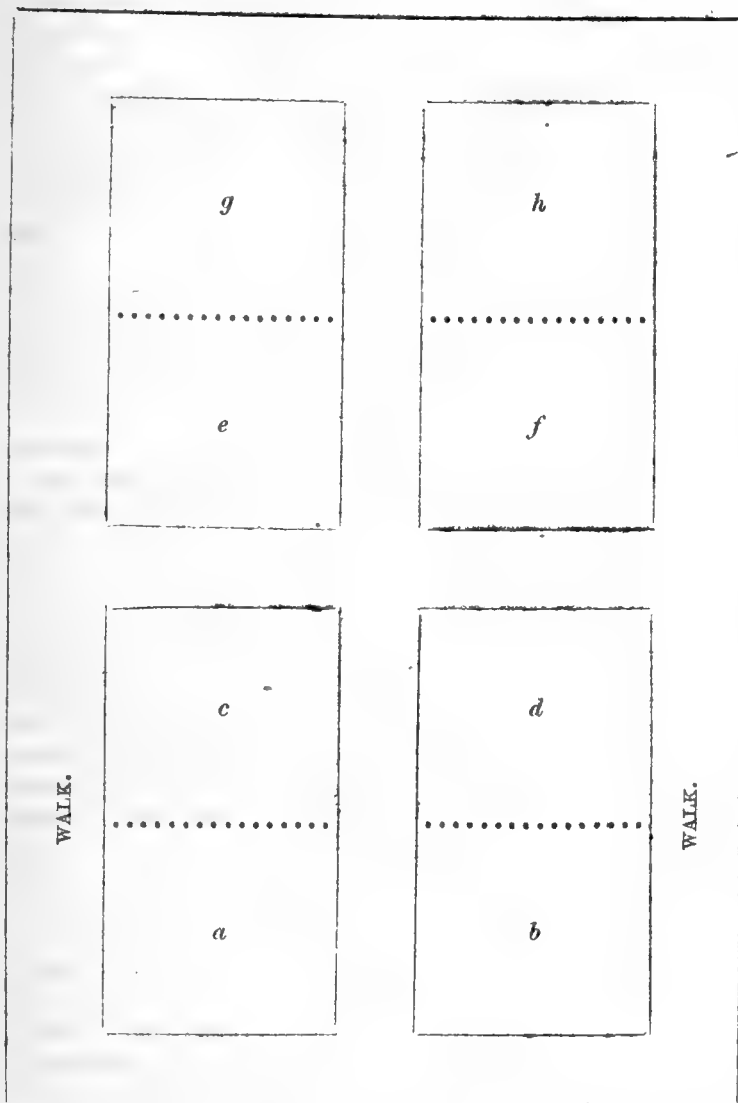
sometimes lulls. This, of course, is never the case with the ardent admirers of such things; with them, it is questionable if the appearance of a root of a good variety of Tulip does not create greater emotions of pleasure than the sight of the flower does to a careless observer.

The early part of September has been remarkably fine for the ripening and perfecting of all kinds of fruits, excepting such small fruits as Strawberries and Raspberries on light, dry soil, which have suffered much; but wall-fruit and the general orchard fruits have benefited much by it; while the all-important staff of life, corn, has been got together in excellent condition; and, at the time I write, hop-picking is being proceeded with under favourable circumstances likewise. But I must not omit to say, that the crop of orchard fruits, as *Apples*, *Pears*, and *Plums*, has not been great, but the fruit seems quite as good in quality as usual.

In the flower-garden there has been a good display where sufficient moisture could be secured; but in some other cases the dry weather has been too much for them, and plants are withering that ought to have been in vigorous growth. This likewise applies to some vegetable crops, as *Peas* and *Turnips*. The latter, doubtless, will rally again with rain; but *Peas* have been too much affected to be of any further use. *Onions* are various; and *Potatoes*, though not affected so much with disease as on former years, are smaller in size than usual, but in quality are excellent, and not likely to suffer from after disease. The best crop I have seen was from a piece of ground from which a heavy crop of young Larch-trees were removed last autumn; and the worst diseased ones were on a piece of ground which had been Potatoes for some years, but this season was sown with Swede Turnips, which, falling a victim to the fly, some self-sown Potatoes were allowed to stand until the end of July, when they were taken up, worse tainted with disease than any that I have seen. *Cabbages* and *Cauliflowers* have suffered as usual from caterpillar, which, I believe, has abounded on other plants as well; while the depredations of birds, wasps, and large flies, amongst the fruits, have been less than I ever knew it; but it is possible these pests may have been more numerous elsewhere.

- a.—Nothing particular is required here, save to keep down weeds, and otherwise to remove any unsightly object. The late *Raspberries* will, doubtless, still continue in bearing; but the dry weather has been much against them. Remove any suckers that are left at the end of this month, or when they are ripe; but the pruning had better be deferred till spring.
- b.—This plot, being all planted with winter crops some time ago, will not call for any particular attention now, especially as the earthing-up would be accomplished last month. Weeds must be kept down, and a steady, uniform growth encouraged,—not a gross, hasty one, which only tends to render the plant less able to endure the winter, if severe.
- c.—The *Asparagus-beds* will now want a thorough cleaning, after the tops have been cut off, which ought not to be done until they become yellow and the seeds ripe. Some covering is necessary in very exposed places; but it is questionable if any protection be better than their own foliage, when cut and laid down in a thatching manner; but the amateur who is anxious for everything to look well in his garden, may break a little of the soil from off his beds, cover them with rough dung, and return the soil again, making all appear fresh and clean. Towards the end of the month *Sea-kale* will be ripe enough to force, which may either be done in the ground, or by taking it up, and forcing in some heated structure; the particulars of which plans will be given in another chapter.

d.—The earthing-up of *Celery* must no longer be delayed; but if dry weather continue up to the beginning of the month, a good application of liquid-manure will hasten on the growth. Take care, in earthing it up, that no injury is done to the plants, and let that operation always be done in dry weather, if possible; and apply coal-ashes to some that have to stand the winter,—it is a less agreeable medium for slugs, and somewhat of a preservative as well.



e.—It is likely the *Peas* will have been all gathered before this; if so, let them be cleared away at once, as their presence is against the *Brocolis*, &c., doing well. Keep all clean and neat: and although it will be difficult to make a crop, partly overtopped by *Peas*, look well for a time, yet they speedily assume a more robust character.

f.—The plantation of *Cabbage-plants*, recommended last month, ought to be put in now, if not done then, the *Kidney Beans* being supposed to be no longer useful. Be careful only to use the best plants, and give every encouragement to their growth, by making the ground good with manure, &c. If the whole likely to be wanted be not all planted now, it would be better to reserve it until spring, as it is better to have the whole plantation in one place.

g.—Take up and store away the *Carrots*, but let the *Beet*, *Parsnips*, and *Salsafy* stand. Dig the ground; and if it should be in a sheltered situation, perhaps it will do for the first crop of early *Cauliflower*; but, in a general way, that crop is better on the wall border.

h.—The *Turnips* sown here very late may, possibly, want a little thinning the beginning of the month; but this will be best known on the spot. Remove

all weeds and other rubbish, and let such things as *Endive* and *Lettuce* be fully exposed, and *Celery* attended to, in the way of earthing-up, &c.

KITCHEN-GARDEN BORDERS.—Seedling beds of *Lettuce*, *Cabbage*, *Cauliflower*, and other things, must be kept clean, and the crops not allowed to injure each other by growing in too close contact, although they may be allowed to be moderately thick without injury; but a little labour in providing another bed and planting them out will obviate much of the unpleasantness of planting-out crooked, long-legged plants in spring. Keep all other crops free from weeds, or other obstructions, as *Onions*, *Spinach*, *Parsley*, *Radish*, &c.; and though it is uncertain now to obtain a crop, yet a little *Lettuce* might be sown at the beginning of the month, and the produce protected against slugs, and a useful crop will often follow. Ground that has been dug some time is better for this than when fresh dug. Clean beds of *Herbs*; and, as it is supposed all have been cut and dried that the season requires some time ago, a thorough clearing may now be given, and all dead stems, &c., cut away. Prepare ground, and plant out the first lot of early *Cauliflowers* under hand-glasses; but if these be not to be had, plant them where some homely-contrived shelter can be given them. A late crop of *Lettuce* may also be planted under similar circumstances; in fact, beds of the ordinary width might be hooped over, and mats thrown over on severe nights. Reserve a part of this border for the first crop of *Peas*. Other things for which the amateur takes a fancy may also have a position here; and, doubtless, a few beds of flowers in reserve will be as necessary adjuncts as any to this department.

FRUIT-TREES ON WALLS, AND ESPALIERS.—It will be too early to prune or do much to these until the end of the month, or even next month; but much will depend on the forwardness of the respective specimens. The fall of the leaf need not be waited for entirely, because it often ceases to be of use long before it drops off; but a practised eye can tell at a glance if it has done its duty. Gather all fruit that may want gathering, storing away *Apples* and *Pears* in some airy situation; cool, it ought to be, but free from frost. I will, at a future time, enter more fully into this subject; suffice it to say, that careful handling, and laying the fruit thinly on the floor or shelf of a cool room, will, in most instances, be all the amateur can command,—all, in fact, that can be done by any one; only, where a large quantity of each kind are preserved, it is better to provide a place on purpose, adapted to the wants of the case.

FRAME.—The *Geraniums*, *Calceolarias*, *Cinerarias*, *Myrtles*, and other plants, which will be wanted to ornament the windows of the rooms, or elsewhere, during the winter and spring, will have an asylum here for the time being. For that purpose, place the frame on some dry, airy place, on the surface rather than under it, and cover the bottom of it with coal-ashes pretty thickly, on which place the plants named above, or any others that may be grown in pots, after thoroughly cleaning them, and give air on all fine days; in fact, let them be fully exposed on such occasions, sheltering them only from heavy rains. A plant or two of a kind is all that can be kept in a single frame, which ought to be such as flower either early in spring or during the winter. The *Cytisus*, *Coronilla*, *Acacia*, and other shrubby things, will do, provided that the back of the frame be high enough for them; and some nice, sturdy plants of *Veronica speciosa*, *Sieboldii*, *Andersonii*, and others, look well, whether in flower or not; but the amateur will have no difficulty in filling his frame.

ROCKERY.—This will require a good, thorough dressing-up, after the main bulk of the summer flowers are over, and all straggling ones cut back and kept in order; and, if needs be, some may be removed entirely,

planting others in their places. A few bulbs scattered amongst the other things will look cheerful in early spring. Other work necessary here will partake much of the character of ordinary flower-gardening.

FLOWER-GARDENING.—If all the propagating and planting-out mentioned last month were done then, there will be little wanted that way just now, except that shrubby *Calceolaria cuttings* ought to be put in now in quantity. Small slips, about three inches long, slipped off the sides of a plant, and a leaf or two at bottom removed, may be put into large, wide-mouthed pans, or boxes, and then placed in any shady situation out of the reach of frost. They speedily root, and any position not too dry will do for them during the winter. Rooted *cuttings of Geraniums*, which were put in the ground last month, will now have to be taken up by the beginning of this, and planted thickly in pots or pans to stand the winter; a few of the best may be in single pots, if thought advisable; but the great thing is to find room for such plants; but these are very accommodating, as a dry atmosphere will preserve them with only a limited amount of light, while a damp one will suit *Calceolarias* best. *Verbenas*, *Petunias*, *Heliotropes*, and several other things like the same treatment as *Geraniums*.

In the open ground, the long, damp nights will tend to reduce the gaiety of flowers, even if frost does not appear, which it doubtless will towards the end. Whenever it does, and mars the appearance of the tender things, then it would be as well to remove them at once, and clean and dig the borders, *i. e.*, supposing there be nothing else worth retaining. But the late *Asters*, *Crysanthemums*, and other flowers, often do well until a very late period; *Dahlias* are a general index to the delicate kinds, for whenever the *Dahlia* is cut off, other plants, such as *Geraniums*, *Petunias*, *Heliotropes*, &c., are no longer of much service, while the *Cuphea strigillosa* will continue to flower until very late, its pendant blossoms resisting both moisture and frost. Plant out bulbs of *Tulips*, *Hyacinths*, *Crocuses*, &c.; and any herbaceous plant that was not planted out last month.

Mow the lawn as long as required, and if worm casts disfigure it a good application of lime-water will dispel them for a time. Clean the walks, and, when necessary, fresh gravel them; but this is not advisable where deciduous trees overhang them until the leaves be all off the latter, and then the thorough autumnal clearing up may take place. In the mean time, much may be done to keep the whole in order, and many jobs may be forwarded now as well as later. It is a good time to plant *Evergreens* and all shrubs, but at the same time, do not allow such works to derange the general appearance of things any more than can be avoided.

J. ROBSON.

ALLOTMENT FARMING.—OCTOBER.

THIS should be a busy month in the allotment, clearing the ground of the refuse crops for the pigs, and of all autumnal seed weeds, and preparing the vacant ground by dunging for present, and ridging for future, cropping. The hoe should be kept frequently employed between rows of young Cabbages, Coleworts, Brussels Sprouts, Savoys, Brocoli, Spinach, &c., and to hand-weed the beds of young Winter Onions, Carrots, Lettuces, &c. The *Cabbage Plants* of the August sowing should now be pricked out into nursery beds, and some of the strongest planted out finally for an early crop; the others to stand over the winter, and planted out in the spring.

CARROTS.—The main crop may now be taken up, either in part or the whole, and the tops cut off and given to the cow, pigs, or horse, and the roots packed in dry sand, in alternate layers, under cover, ready for use in winter. It is particularly necessary that the crops of all roots should be taken up with the greatest care, as rotteness, when it is owing to any external cause, always commences at any cut or bruised

portion of the surface. It, therefore, becomes of importance that the surface of the roots should be cut or bruised as little as possible. The root fibres should not be cut off at all, and the leaves should be cut off as far from the crown of the root, as that they may fall separated from one another.

PARSNIPS not being so liable to the attacks of grubs as the Carrots, should be allowed to remain in the ground, and dug up as wanted, until a severe frost sets in, when a supply to last for a few weeks should be taken up and stored like Carrots.

CAULIFLOWER PLANTS of the August sowing should be transplanted, three or four inches apart, into some sheltered situation, on the south side of a wall, hedge, or fence, to be protected by hand-glasses, or into a frame. We have potted them singly into 60-sized pots, and protected them in a cold frame, and in a greenhouse during the winter, and being turned out into the open ground in March, with a large ball of roots to each, without suffering the least check, the produce was most satisfactory. The August sown *Lettuces* may be treated in a similar manner.

Continue to take up **POTATOES** in favourable weather. Those intended for seed should be dug up before they are thoroughly ripe, and exposed for a few days to sun and air to green them; the practice is generally supposed to increase the health and productiveness of the succeeding crop.

ASPARAGUS-BEDS should receive their winter dressing by cutting down and clearing away the stalks of the plants, covering the bed with a coat of rotten dung, and then with two or three inches thick of the soil from the alleys.

To protect the heads of *Cauliflowers* from frost, it is advisable to take them up in time, and to plant them in any light soil, in a dry shed or cellar, until they are wanted for use. We have frequently seen whole plantations of Brocoli, Brussels Sprouts, &c., and large-headed Cabbages, destroyed by the severe frosts of winter. To obviate the danger, it is necessary to take them up towards the end of the month, and to lay them in by the heels, closely packed in rows, with their heads to the north, in any sheltered corner of the garden. By taking them up at this time their luxuriant growth is checked, fresh spongioles, or roots, are formed, by which they are the better enabled to withstand the severity of winter, the ground is set at liberty for other crops, or to be ridged up and exposed to the ameliorating influence of the winter frosts.

All late *Apples* and *Pears* should be gathered before they are touched by frosts, which would both injure their flavour and prevent them keeping so long as they otherwise would do.

THE FLOWER-GARDEN plot should now receive some attention by cutting down and clearing away flower-stalks, hoeing and raking the beds and borders, weeding walks, &c., that the whole should appear neat and orderly during the winter. Any improvements or additions that the experience of the past season may suggest should be carried into execution. *Fruit-trees*, and all *deciduous trees*, can now be moved with safety. The late-flowering *Phloxes*, and the varieties of the beautiful Chinese *Chrysanthemums*, will now look cheerful and very ornamental when tied up so as to show their flowers to advantage. *Dahlias*, as soon as the frost has blackened their leaves, should be taken up, and the stems cut off within six or eight inches of the tubers, and put away in any cool, dry place where they will be free from frost. *Polyanthuses*, if they have grown into large patches, should be parted and reset without delay. *Auriculas* should be placed where they are to winter, if protected by a frame or handlight, with bricks placed at each corner, raising them from the ground, to allow at all times a free circulation of air amongst the pots. They are often sheltered by a board hinged to a wall. *Tulips*.—The main bed should be planted about the middle of the month, taking advantage of fine weather when the ground is dry. *Carnations*.—Keep the potted layers in a close frame until they make fresh roots, and avoid wetting the leaves, to prevent the spot appearing on them.

Winter Vetches, *Winter Beans*, and *Wheat* may be sown this month; the first after a grain crop; the second after a grain or green crop; and the third after a green crop. For the Vetches, the ground should be dug deeply, and manured, if not already very rich, and the seed drilled at the rate of three bushels per acre, in rows six inches apart. A small

quantity of Wheat is sometimes sown in the drills to assist in supporting the Vetches.

BEANS.—The *Tick*, or *Horse-bean*, the *Heligoland*, the *Horn*, and *Russian*, are the kinds commonly cultivated on the farm. They usually follow a corn crop, and generally precede Wheat, for which, as they are manured, they are considered a good preparation; they require a stiff soil, and succeed best on a clayey loam that is deep and dry. The land should be dug deep and well-manured. In some districts, Beans are sown by a hand-barrow, as the land is being ploughed, and the plants accordingly come up in rows twenty-seven to thirty inches apart. In other districts they are hoed in; but the best plan for the allotment is to use a double line, nine inches apart, with an interval of thirty inches to the next row. Dibble in the *Horn* or Winter Beans, and let the holes be filled up with the hoe. Three bushels will be sufficient to plant an acre. It is usual, in some districts, to sow a few Peas with the Beans, to afford bands for tying the sheaves. The after-management will consist in keeping the land clear of weeds until fit for reaping, which is easily known when the leaves wither and the seed is hard. The crop to be cut close to the ground, and being tied into sheaves is stooked, and, when quite dry, stacked and thatched. The haulm, or straw, when fresh, is cut into chaff, and mixed with bruised oats or beans, and relished by horses. They may also be used with steamed Swedes as food for milch cows or pigs.

WHEAT.—There are two distinct kinds, known by the hue of the seed, namely, the red and white, and of each there are numerous varieties. The red is considered to be the hardier and best suited for the inferior kinds of Wheat land, and amongst its varieties, *Spalding's Prolific* and the *Red Kent* are much esteemed. Amongst the white kinds, the *White Kent*, *Red-chaffed-white*, and *Pearl*, are highly prized. If the ground was dug or ploughed sometime before the seed is sown it gets a firmer bed, which is essential to its success. The seed should be dibbled, that is, sown by hand in holes made with a dibble, four or five inches apart in the row, and about two inches in depth, one row from the other to be nine inches apart—one, or, at most two, grains being dropped in each hole and covered with the hoe. The distance between the plants materially affects the weight of the crop. What would some farmers say, if we proposed to hoe out the Wheat plants to ten inches or more apart, as is done with Turnips, Mangold Wurtzel, Carrots, Parsnips, &c.? and yet, whoever has examined a crop of Wheat of six or seven quarters an acre, as at Tiptree-hall farm, will have seen that it consisted of tufts of ten or fifteen stems, each proceeding from one coronal root, and that such plants required nearly a square foot of ground to grow in. If they are crowded, the side stems are weak, and bear but small ears; but if they have sufficient room, all the stems are of equal length, and all the ears equally large; this, besides a heavy crop, produces an equal sample, which is more valuable in the market. The practice of dibbling the Wheat, which is found so useful in Norfolk and Suffolk, leaves proper intervals between the plants which can be hoed. The great fault of the dibblers is, that they put too many seeds into each dibble hole. When land is well prepared, a bushel of seed is ample allowance for an acre. Whenever a simple and effective machine shall have been invented to make holes and deposit the seed with certainty and expedition, or a perfect drop-drill, which will answer the same purpose, and the land shall have been carefully prepared to receive the seed, we may expect to see the average produce of corn in Great Britain and Ireland very considerably increased. Wheat is liable to injury from the diseases known as smut and rust, both of which are considered to be a species of fungus; to prevent which, the seed is steeped, or immersed, previously to being sown, in a solution of salt, or in old chamber-ley; to both of which, blue-stone, and sometimes corrosive sublimate, or arsenic, are added; and the Wheat is dried and prepared for sowing, by having some lime in powder mixed with it.

We have sown Wheat broadcast in beds in the kitchen-garden this month, and transplanted them the middle of March, in rows, nine inches apart, into the farm land, where they produced abundant and regular crops, the admiration of all who saw them. Peas, Beans, cereals of all descriptions, Turnips, and all other fibrous-rooted plants, could be sown in beds and transplanted with advantage. The increased pro-

duce by such means would more than repay the extra expense, besides giving employment to a greater number of men, women, and children—a philanthropist, doing good to himself, and doing good to others who live by their labour. It is also right to bear in mind, that a great deal of the success depends upon the proper distances at which the plants are set apart, the habit of the plant—spreading, erect, or conical—will be the best criterion to judge of what is the proper distance from plant to plant of every crop. Grow twenty plants closely together, without room to expand themselves, and on a piece of ground similar in size and quality, but with the plants at such distances that only ten could find room to expand their heads, foliage, and roots, without detriment to each other; depend upon it, the ten, whatever sort they may be, will be more productive, and of better quality, than the twenty. Many farmers also tell us, that when land is ploughed deep, the crops run too much to straw; but if they sowed thinly, after deep ploughing, to give each plant free access of sun and air, they would soon see whether the increased supply of nourishment was needed or not, by the fast increasing growth and extent of the tillers. It is when sown thickly that the stalks become elongated, or, as it is termed, drawn up, in a rivalry one with another to seek the light and air; but by allowing room for each to expand, the straw will be more firm and matured to resist high winds and heavy rains.

TURNIPS.—The produce, as to weight of crop, will depend on the care bestowed on their cultivation, especially as to thinning in time, and the frequent use of the hoe in destroying weeds and stirring the soil between the rows.

MANGOLD WURTZEL.—Towards the end of the month the bulbs will have nearly perfected their growth; and then, and not before, the outer leaves may be stripped off as food for milch cows and pigs.—WILLIAM KEANE.

NOTES FROM PARIS.

THE FRUIT TENT OF THE HORTICULTURAL EXHIBITION.

At the present time, the principal attraction of the Universal Horticultural Exhibition here is, undoubtedly, the fruit tent, though it cannot, in respect to natural fruit, be compared to the fruit tent of Chiswick, or that of the Regent's Park, at the July Exhibitions. Indeed, on the whole, the fruit exhibition would be a failure, in the absence of M. Leroy's collection of plums and pears (in pots), and the artificial fruits shown by MM. Jamin and Durand, the large case of tropical fruits in wax shown by M. Humbert de Molard, with one or two smaller contributions of the same kind.

There are no *Pine Apples*; and *Peaches*, *Nectarines* and *Melons* are scarcely worth mention; and the *Grapes* are neither well swelled nor bloomed. The benches intended for the fruit are chiefly occupied with cut flowers, such as *Roses* and *Pansies*.

The collection belonging to M. Leroy, at Angers, in the department of the Main et Loire, being, at the time of my visit, the most prominent, I shall give it precedence in my notice. For the most part, all the varieties were shown on the branch, or rather on the young tree growing in its pot, each tree about three feet high, having, on an average, from eight to ten fruit.

The **PLUMS** were twelve in number, comprising the *Reine Claude dorée*, *Reine Claude violette*, *Jacinthe* (Hyacinth), a small pearl-like variety. *Blue de Belgique*, *Nelson's Victory*, pretty red, *La Petite Mirabelle*, a small oval yellow sort, very abundant at present in the markets; *Quetsche d'Italie* in the way of *Jacinthe*; *Pond's Seedling*, a beautiful red variety of oblong form, and about two inches in length. This is perhaps more common in gardens here than it is in England. *De Jerusalem*, something like *la Prune de Mousier*, in form and colour, that is to say, round, dark red, and well bloomed. *Dame Aubert*, a fine, yellow variety, in the way of *Pond's Seedling*, but scarcely so large. Is it because they cannot be ripened in time for the July exhibition that plums are so limited in variety at Chiswick and Regent's Park? As yet, I have not seen our favourite yellow sort, *Coe's Golden Drop*, but its merits are well known here and in Belgium.

Of PEARS, M. Leroy had twenty varieties, also on the young tree. In general, though admirably grown, they would have been much improved by a few days more sun. The best samples were *la Belle de Bruxelles*, *de Tongres*, *Colmar d'été*, and *Chaumontel*.

In another collection of Pears, shown by MM. Jamin and Durand, at Bourg-la-Reine, the best were *Bergamotte de Bruxelles*, *Théodore d'été*, *William's Bon Chretien*, and a new variety called *Beurré Lestre*.

A collection of fruits, seeds, and roots from Algeria, such as Melons, Oranges, Maize, and cereals of different kinds, was sent from the War Office shortly after the opening of the exhibition. These, at first, were arranged in what is called the Tent of Industry, but they have lately been transferred to the Fruit Pavilion.

M. Gaultier et fils, Avenue de Suffren, Paris, had a sample of GRAPES called *Raisin de Madeleine*, which, as was stated on a card, were slightly tainted with the vine disease. With these were some good examples of Pond's seedling Plum; a dwarf tree, in pot, of the *Belle Poire de Bruxelles*, having ten finely-ripened fruit; a small round Melon, called *Melon de Arkangel*, grown in the open ground, together with twelve coloured drawings of different varieties of Strawberries.

M. Noyé, of Lyons, has contributed several samples of alimentary substances, such as Vermicelli, prepared from Potatoes and Spanish Chestnuts. These are in the form of small pearl barley, tightly corked in bottles, like glasses; the Potatoes having been simply cut into small, thin pieces, and dried by some particular process, so as to resume, when cooked, their natural appearance or colour. These are something in the same way as the prepared vegetables commonly sold here under the name of *Julienne*, and which, when cooked, cannot be distinguished from vegetables just brought from the market.

M. Lioret, Paris, has contributed a few unnamed samples of Grapes and Pears.

Some of the roots, as well as the plants in pots of *Dioscorea batatas*, the especial protégée of M. Decaisne, have been contributed by M. Paillet, Rue d'Austerlitz, Paris. These roots, or tubers, are fully eighteen inches long, with an average diameter of two inches. Their general appearance as candidates in succession to the throne of *Solanum*, should that well-founded dynasty ever become extinct, is not very cheering. It is, indeed, very doubtful whether this new claimant will, in the end, fare better than hundreds of others, which, of late years, have been brought forward by different parties. The fork with which it is proposed to lift these tubers is of proportional length, and if we take into account the length and thickness of the handle, or shaft, required to "prize" it up when fully inserted, we have an implement of formidable dimensions.

Of the ARTIFICIAL FRUITS, the best collection is that shown by M. Humbard de Molard, Rue de Meslay, Paris. This comprises about fifty different sorts of tropical fruit, such as the *Mangifera domestica*, *Limonia trifoliata*, *Sapindus saponaria*, *Euphorbia punicea*, *Garcinia mangostana*, *Barringtonia speciosa*, *Caryophyllus aromaticus*, *Carica papaya*, *Annona muricata*, *Cookia punctata*, *Piper nigrum*, and *Arctocarpus incisa*. These models are admirable works of art; for it is not the fruits merely which have been imitated, but a branch showing several stages of growth, from the flower bud to the ripe fruit, together with carefully prepared sections, and all of the full natural size. It is singular that the Directors of the Exhibition have not thought fit to attach the name of the owner, or of the artist, to the case of modelled fruit. The name of M. Humbert de Molard is given in the catalogue of the Society as the exhibitor of a "collection de fruits de l'Inde," that is—collection of Indian fruits. The botanist knows that a most instructive and interesting volume could be written about these fruits, respecting their use in commerce, or in the arts. It is, therefore, matter of regret, that something like a succinct account is not given with them for the information of the public. People say, as they look at them, that they are very singular, curious, or beautiful; but they are left to form their own conjectures as to what they really are, how they grow, where they come from, what they are used for, the revenue they yield, the labour they employ. What is the use of such an exhibition if it is not to afford instruction?

The next contribution of artificial fruit is that belonging to MM. Jamin and Durnand, at Bourg-la-Reine. Here we have only the common garden fruits, as Apples, Pears, Peaches, Plums, Apricots, Strawberries, Gooseberries, &c., and all we require to know is their names, which are given in every case. These models, comprising several hundreds of different varieties, are very faithful copies, and in many instances it would be exceedingly difficult to distinguish them from the natural fruit. They are neatly arranged on narrow shelves, so that they can be readily examined, and their names ascertained. A miscellaneous collection of the same kind occupies a large basket, about four feet long, and of proportional width, apparently full, but, in reality, only full at the top. This is more an ornament for the saloon than anything else; but in most cases the names are written on very small parchment labels, attached to such kinds as have stalks. Apricots and Peaches are never modelled with their stalks (for what reason, I do not know), and, therefore, when the names are given, as in the collection of MM. Jamin and Durand, they are pasted on the surface of the fruit. This contribution is the gift of M. Chevet (or Brevet), Rue de l'Université, Paris, to the members of the Society. So much for the Universal Exhibition of fruit.

During the last few weeks the *Victoria Regia* has been in flower, but it has not attained its full development. The leaves are just about four feet in diameter, and some four or five flowers have appeared.

A collection of novelties from Messrs. Standish and Noble, Bagshot, and another from M. Linden, of Brussels, have lately been added to the Exhibition. I shall notice these by-and-by.—P. F. KEIR.

THE APIARIAN'S CALENDAR.—OCTOBER.

By J. H. Payne, Esq., Author of "The Bee-Keeper's Guide," &c.

THE SEASON.—I must still hold, from the information I am gaining, that the season has not been a good one, but only a middling one; there are, no doubt, in the worst of seasons, certain localities in which a fair portion of honey is collected, as in the vicinity of large breadths of white clover, or heather, this is sure to be the case. Although the stocks are comparatively few, owing to a succession of bad seasons, yet the remaining ones, in some favourable districts, have done tolerably well, and it is hoped that amateur apiarians will not be disheartened, but look forward, with hope and confidence, to more propitious times, to make up for the discouragements of the last few years.

STOCKS.—It is now full time for the stocks to be put in order for the approaching winter; defending them effectually from wet is of the first importance; narrowing the entrances to prevent the ingress of mice is also necessary, as well as their destruction in the neighbourhood of the apiary.

PEDESTALS.—Where hives are placed upon pedestals of wood, it is necessary to examine them very carefully before winter sets in, and if they are found at all unsound to replace them with new ones; for want of this precaution, I already know of one excellent stock, this autumn, in a Taylor's bar-hive, being quite destroyed; the late winds snapped the pedestal at the surface of the earth, where it was found to be decayed nearly through; the stock was not only destroyed, but, from its great weight, the hive also much broken.

BEE-BOOKS.—Since writing my last Calendar, another valuable addition has been made to the already large number of books in circulation on the subject of Bees, by a fifth edition of Taylor's *Bee-keeper's Manual*. It contains a large portion of new matter and new illustrations; it contains, also, all the latest improvements made in bar-hives, dividing hives, &c.; in short, the book brings down the subject of apiarian practice and experience to the present time. I have read it with much pleasure; it will not mislead the novice in bee-keeping, and the experienced apiarian may read it with profit. The author has, very properly, in my opinion, placed his shallow bar-hive, although the last invented, first in his illustrations of bar-hives (see page 53). This hive, as I have before said, is, in my estimation, the best amateur's hive that has ever been

invented. I have had one in use five years, and every year strengthens my good opinion of it. I have never known the queen to enter the super, and, I believe, from the nature of the communication between the two boxes, she never will; the honey it contains is, therefore, always of the purest quality, and can be extracted with the greatest ease. Last week, in the middle of a fine day, I removed the top from the super of this hive, and took two bars loaded with the most beautiful honey-comb, without gloves, or any protection whatever, and with little or no disturbance to the bees; there being neither queen nor brood in the box, the bees were perfectly gentle.

LIST OF SUPERIOR PANSIES.

In answer to a *New Subscriber, Manchester*, the following are first-rate varieties. You may give Pansies in pots, when freely growing, very weak liquid-manure every fourth time you water them; but if they are in the open border, and that made rich, liquid-manure would be injurious; for be it remembered, the Pansy is very apt to die off at the collar, just between the stem and the root, and rich manure-water would increase that tendency by inducing a too-gross growth. In dry weather, water freely with pure rain water, which will be quite rich enough for the Pansy.

CLASS 1ST.—SELFS.

Alba magna (Thomson); pure white, fine form, and good substance.

Flower of the Day (Downie); large flower, good form, rich dark mulberry.

Memnon (Turner); large and fine form, and of a rich velvety purple; extra (new).

Nonsuch (Turner); yellow; fine form, with a large dark eye.

Sovereign (Dickson); rich yellow, with dark eye; very stout, and fine form.

Duke of Perth (Handyside); rich dark maroon; fine form, and constant.

Goliath (Bragg); very dark; fine form, and large flower.

CLASS 2ND.—YELLOW GROUNDS.

Charles Turner (Hales); yellow, top petals broadly edged with rich maroon; fine form.

Comet (Turner); deep yellow, with broad margin of reddish-crimson, well marked eye, smooth and good shape; very distinct; new.

Emperor (Hales); rich yellow lower petals, top petals deep maroon, bottom petals edged with rust colour; fine form, and constant.

Father Gavazzi (Holland); rich yellow ground, with broad margin of crimson-purple, large, prominent edge; very distinct, and a striking flower; new.

Fearless (Schofield); yellow and rich crimson-purple, with large, dark maroon edge, margin broad; extra fine.

Marion (Dickson and Co.); pale yellow ground, broadly margined with purple. A large, fine flower of good form.

Monarch (Hall); gold-yellow ground, top petals dark velvety maroon, lower petals margined with the same colour, bold, dark edge; fine form; extra.

Royal Standard (Dickson); pale straw ground, margined with rich velvety purple; good dark edge; a smooth, large, and fine variety.

Victory (Hales); deep yellow, with broad margin of bronzy-red; good bold eye; a well-defined and distinct variety.

CLASS 3RD.—WHITE GROUNDS.

Criterion (Hooper); pure white, with delicate, narrow, blue margin; very good.

Earl Mansfield (Dickson); white ground, with broad purple margin; small, beautiful eye; a large, smooth, striking, distinct variety.

Isabella (Turner); lower petals pure white, top petals deep blue, the lower broadly margined with the same colour; medium size, with a clear good eye; new.

Lady Bute (Downie); clear white ground; rich, broad, purple margin; medium size, with a well-formed, distinct eye; fine.

Murchioness of Bath (Wheeler); clear white ground; top petals and margin of a blue colour; good eye, and fine form; a large flower.

National (Turner); clear white, with a narrow margin of light purple; top petals the same colour.

Royal Visit (Dickson); clear white; lower petals broadly margined with dark purple, top petals the same colour; a fine variety.—T. A.

QUERIES AND ANSWERS.

GARDENING.

PREVENTING SECOND SWARMS.

TRULY glad am I to find that Bees are resuming their proper place in your columns, and much pleasure have I in answering "Abeille's" question.

Permit me to say, first, however, that the heading of the short paragraph in *THE COTTAGE GARDENER* for July 24th, 1855, "*Successful Bee-keeping*," was none of mine. On the contrary; the object of my sending the few lines was simply to inform bee-keepers who have the *Country Curate's Book*, and act up to his plans, that removing stocks in the way recommended by him, in pages 38, 39, and 40 of "*The English Bee-keeper*," to prevent second swarms, is not always effective.

I may here remark, that for the last three seasons I have removed a great number, and never had but one second swarm. This year, however, every removed hive (in number six) swarmed twice, and so did one, the only one, of a neighbour's, so treated.

I must refer "Abeille" to the *Country Curate's Book*, pages 38, 39, and 40, for an explanation of the whole affair. I fear "Abeille" has not yet discovered that second swarms are no proof of "successful bee-keeping."—FRANK GRANT.

WINTERING ROSE-CUTTINGS.

"I have some Rose-cuttings striking, and shall feel obliged if you will let me know as to their standing the winter out-of-doors.—J. T."

[The mere act of taking off a cutting from a branch, or tree, will not alter the constitution of the said cutting in the smallest degree; therefore, a cutting taken from any plant which will stand our climate, will not take any hurt from frost, provided its constitution has not been weakened by some cause or other since it became a cutting; and even then, it is not the frost that kills one-tenth of the cuttings which die during the winter, but too much damp. There are Roses which the frost will kill, certainly; and if your cuttings are from such Roses, the frost will kill them also, if it reaches them in sufficient force; but most of the Roses do stand our winters, and cuttings from all such will stand the winters as well, with the above limitation.]

PRESERVING ICE.

"I shall feel much obliged if you can give me any information as to the construction of an Ice-house, on what you consider the best and cheapest plan.

"I understand that in America, and the West Indies, they are made of wood, the sides and roof having double boards, and the space between them filled with sawdust, or some non-conducting material. Does this method answer in this country?

"It would only be required for a small family, and I should like to know the dimensions and something like the cost; what situation is the best, and what apertures are necessary for filling and taking out the ice?—F. W."

[We never advise any one to build an Ice-house; and when we do hear of a man building an Ice-house for himself, we wonder some friend does not suggest a madhouse instead.

Ice melts, more or less, wherever you put it, in this kingdom; where ice or snow melts, the dampness from it fills the air with as much moisture as its own heat can sustain or hold together, and very damp air, at 60° in the shade, will melt ice three times faster than dry air at 90° in the

full sun. You have only to believe this, which is far below the reality, to see how difficult it must be to preserve ice in even the best ventilated houses. There is no way by which we can keep ice so well as by making a stack of it in the open air, in the form of a sugar-loaf, *in the shade*, but not in a wood, or among trees, or under their drip. The right way to thatch an ice cone is the greatest difficulty, and the great secret of keeping ice. The meltings should run off so fast as not to damp the straw over it; and to do that, cross drains pass under the cone, and lots of faggot-wood over the drains, and some straw over the wood, so that the air blows right through under the cone, carrying all damp air with it. When the covering is made as air-proof as possible round the bottom of the cone, the ice wastes the faster, of course, because damp air is more destructive to it than dry air; and confined air—*alias* air saturated with moisture—worse than all; but after all, if you give no more than ten or twelve good dinners in the hot season, and do not average more than twelve to dine each time, it is far less expensive to buy your ice than to store. At all events, we do not know how to build a good Ice-house, and there are no good plans to refer to, or any book worth a straw on the subject.]

ROSE CATERPILLARS AND MILDEW.

"The Rose-trees, both standard and dwarf, in my garden, which is situated about half-a-mile from the sea-side, are so exceedingly blighted this year, that I shall feel obliged by your informing me what measures will be best to adopt to prevent a recurrence of the disease another year. There appear to be two distinct maladies from which they are suffering; in one case, the leaves are covered with a whitish mildew, which curls them up; in the other, they look as if they had been attacked by a leaf-mining insect, which devours the green substance, leaving the leaf quite whole, but brown and transparent. I have not been able to discover any insect in the fact, but certainly appearances are in favour of the supposition.—THOR."

[Of all the Rose blights, the two you have sent us specimens of are the most common. No Rose-garden is ever quite free from the case where the green is eaten from the underside of the leaf, from the end of May till September; but luckily, the caterpillar, which does the mischief is never very numerous, and not at all difficult to "take," if you look for him early in the morning; but he is the smallest of the race, and not unlike the colour of the underside of the leaf, therefore, is not so easily seen as others: but you can always tell the spot where he is from the marks on the upperside of the leaf, and if you rub your finger gently over his body he is no more seen; the least touch destroys him, and he must be looked for and so destroyed by hand. No messing can reach him properly, and, as he is not in legions, he is not difficult to get rid of.

The powdery leaf shows the common Rose mildew, which can only be subdued by dusting flowers of sulphur on both sides and on the shoots. The best managed Roses are just as liable to it as most others, but a low, damp place may encourage it more than a free, healthy place. After the end of August, we merely picked off the affected leaves, or cut back the affected shoots; but earlier, no such freedom should be taken if sulphur can be used.]

PRUNING CASSIA CORYMBOSA.

"I have a *Cassia Corymbosa*, which has made shoots near three feet long this season, and is very full of bloom buds. As it flowers at the points of the new wood, should it not be pruned in after bloom is over? If so, will you kindly tell me how close I should cut it in; and when is the proper time?—THEOPHILUS."

[The gardeners prune *every plant* we have to do with, first before it blooms; and, secondly, after it blooms. All plants which bloom on the current year's growth, like the Vine, and your Passion-flower, and beautiful *Cassia corymbosa*, we cut in very close indeed, or to half the lengths of the young shoots, or to full length, except a little off the points, according to the way and to the shape we mean to grow the plant, and also, according to our own notions of how the

plant blooms best; but on this last point we disagree as much as doctors and lawyers; but one thing we all aim at, and that thing may suggest to you how to prune your *Cassia*. In all woody plants, we all of us agree to prune down to a ripe part. When we want to fill a wall soon, or to have a fine, tall bush, or standard sooner, we prune off no more than just reaches to a *firm* part of the shoot, and very often that part is far from ripe, but we make it do. When we are very much confined to space, to elbow-room and to head-room, we cut it in to the very last joint; and when we have to do with a very free and rambling subject, like your Passion flower, we cut it very close also. Therefore, when your *Cassia* is as ripe as you can make it for that season, you may prune it long, or short, or middling, according to the object you have in view, and the means at your disposal to do it. Mr. Fish often recommended standards of this *Cassia*.]

WHITE SWEDISH TURNIPS.

"In the spring of last year, I had a few plants of White Swede Turnip given to me, the seed from which they had been raised being said to have been sent direct from America, and considered to be something superior. In the course of the autumn, I had some cooked and brought to table along with the Common White and Swede Turnips, in order to compare their qualities, the result of which was, that I at once gave a decided preference to the White Swede as being so beautifully mild and delicious. The few remaining Turnips I preserved during the winter; and although they were subjected at times to very hard frost, I found that they kept as well as our own common Swede. One Turnip, not a large one, but well shaped, I planted in the autumn to stand for seed; but having soon after to leave that neighbourhood (Durham), and remove into Yorkshire, I took the Turnip with me, and early in the spring replanted it; the removal, however, causing a delay of at least a month in its growth. Since that time it has been carefully attended to, and a fortnight ago I had the satisfaction of shaking from it exactly half-a-pound of good seed, which to me appears rather extraordinary as being the produce from one root only. When the seed had well formed in some of the earliest pods, and whilst they were quite green, I took some of the best I could find, and sowed them on a piece of vacant ground, and I have now about two score of very fine plants, such as will, no doubt, grow sufficiently large from which to procure seed next year. I have, of course, been labouring under the impression that this *White Swede* is something uncommon in this country. Will you kindly inform me whether it is so or not, and impart any other information you may be able to give respecting it.—A SUBSCRIBER."

[There is a white Swede which has been long known in this country, but it does not follow that yours is the same. You had better, therefore, procure a packet of the white Swede, from some nurseryman, and grow it side by side with your own, and next year you will be able to judge if they are distinct varieties.]

THE HOUSEHOLD.

(We shall be much obliged by any of our readers sending us approved receipts in cookery, hints for household management, or any other domestic utilities, for insertion in this department of our columns.)

As this is the season of the year when Damsons, Plums, &c., are becoming ripe, and the price obtained for them is not so great as formerly, in consequence of the idea that they are unwholesome, they may be employed very profitably by making them into wine, by proceeding thus:—

PLUM AND DAMSON WINE.—Boil twelve gallons of water, in which has been placed thirty pounds of strong raw sugar; then bruise in a mortar a quantity of Damsons or Plums, that when bruised they will measure, with the stones (which endeavour to have broken), about nine gallons; add them to the water and sugar when cold, with one ounce of German yeast dissolved; put it into an open tub, and allow it to fer-

ment; when the fermentation is over, add one quart of brandy, half-an-ounce of bruised cloves, and six ounces of red tartar, dissolved; put it into a cask, straining it through a coarse sieve as it is put in, then whip up the whites of four eggs with some of the liquor, and add it to it; bottle, when clear, in Champagne bottles, and tie down the cork. Do not use it for six months, and you need not be ashamed to place it before any friend.

WHITE PLUM WINE.—Proceed as above, only using the White Egg-Plum and lump sugar, pale brandy, and cream of tartar; one-fifth the quantity of fine ripe Pears added to the Plums is an improvement.—G. W.

THE POULTRY CHRONICLE.

SPITE of all the preparation possible, there is a novelty in a new position, and its very strangeness is detrimental to comfort. It takes a week or two to be at home in a new house. Such has been our case; but we are now at our ease, and look for our weekly task and pleasure, as we have done for the last eighteen months. It is with unmixed satisfaction we see the old names appearing in the new print; and we rejoice over differing opinions and estimates, knowing that from them the truth will come.

In a publication especially devoted to Poultry, every novelty and discovery should be noted and published. Want of leisure, or, it may be, of scientific knowledge, may hinder an amateur from discovering the cause of some apparently inexplicable occurrence in his yard; but if the event be published, many will immediately take up the subject, and, in almost every case, a satisfactory solution will be arrived at. Amateurs, in the present day, comprise almost all classes, and among them eminent men in science and art; and, while poultry-keeping forms their relaxation, their very love of it will cause them to devote to it some of those energies which elucidate and overcome difficulties of a far more important and serious nature. We rank Poultry shows with those for flowers and cattle. In both these, volumes of knowledge have been gained, not only as to shape and breed, but the fittest soil, and the most economical food. The publication of it has abridged, by years, the probationary time formerly necessary before anything like successful competition could be ventured upon. We wish to see the same done in our favourite pursuit; and we want to see all experiments published with their results. Where fowls have begun to lay early, we should like to know the soil and the food. Where they have been suffering from disease, we should like to know the treatment adopted and followed.

But there is one subject we would urge on those of our readers who have taste and leisure for detail. The time of year is now coming on when eggs are scarce, and, consequently, valuable. There is, then, an important question which has not yet been carefully studied and answered. What breed of fowl will produce the greatest money value, or amount of food in the shape of eggs, at the least cost? The production of food is among the most important part of poultry-keeping, and should enter into the calculations of every amateur. Where

ever this is attended to, and fowls are judiciously exhibited, the pursuit will be more than self-supporting; and while we press the question on the attention of our readers, we ask them to keep us well informed as to results. We believe they will find a profit every way in acting on our suggestions.

ECONOMICAL POULTRY-FEEDING.

THE present price of corn renders it more than usually imperative on poultry-keepers to practice the most economical modes of feeding.

It may be in the remembrance of some of my readers, that last season I directed their attention to the use of Mangold Wurtzel, cut and boiled until pulpy, and then thickened with Pollard or Middlings. I may add, that another year's experience has so convinced me of the advantage of this mode of feeding, that I am growing a considerable quantity of red Mangold Wurtzel solely for my fowls. My object in writing this note is to direct attention to even a cheaper food, namely, steamed Potatoes and Middlings, or Pollard.

In the district in which I am residing, and which is on the London clay formation, the Potatoes are very generally diseased, consequently, medium-sized ones, which are slightly specked, can be bought even as low as 1s. per bushel. Unfortunately, I have no occasion to purchase, my own being but too much diseased. On being dug up they are sorted, the chats (small Potatoes), and speckled ones (excluding, of course, any absolutely rotten), are steamed until quite soft, they are then turned out into a tub, divided, by passing a large knife rapidly backwards and forwards through them, and, whilst still hot, mixed with about a quarter their bulk of Middlings. The whole forms a crumbly mass, which is much relished, and eaten with great avidity. Practically, I can speak strongly in favour of this food, and theoretically considered, it is no less desirable. Potatoes given alone would be most undesirable, for they consist almost exclusively of starch and water, and contain but a very small quantity of those substances out of which either flesh or eggs can be formed. Middlings, on the contrary, are exceedingly rich in fat and in flesh and egg-forming ingredients. Each substance thus supplies that which is deficient in the other, and a good admixture is the result. Of course, the fowls have, in addition, a proportion of grain daily.

Much of the superfluous garden produce that would otherwise be wasted is also used for the fowls. Thus, large French Beans have been steamed this season by the half bushel, and innumerable Cabbages boiled, both being cut up when soft, and mixed with Middlings. Fowls are exceedingly fond of the white part of boiled Cabbages, and there is no doubt of its value in conjunction with other foods, as it is exceedingly rich in flesh-forming ingredients.

I once, when writing to THE COTTAGE GARDENER, fell into the stupid error of quoting and endorsing the statement, that boiled cabbage was worse than useless for fowls; a mistake evidently arising from the fact, that the green colouring matter of plants is not altered by the digestive process, and, passing unchanged through the body, gives rise to the idea that the whole vegetable is indigestible.—W. B. TEGETMEIER, *Tottenham*.

BRIDLINGTON POULTRY SHOW.

THIS was held on the 7th of September. The following prizes were awarded:—

COCHIN-CHINA.—Cock and two Hens.—First, J. H. Barker, Hovingham. Second, W. Dawson, Hopton. Cock.—W. W. Boulton, Beverley. Three Chicken.—J. H. Barker.

DORKINGS.—Cock and two Hens.—First, Rev. J. Hustler, Appleton. Second, J. Stevenson, jun., Hull Bridge. Cock.—W. S. Owston, Bigby, near Brigg. Three Chicken.—Rev. J. Hustler.

SPANISH.—Cock and two Hens.—First, T. T. Pearson, Bridlington Quay. Second, T. T. Pearson, Bridlington Quay. Cock.—T. T. Pearson, Bridlington Quay. Three Chicken.—T. T. Pearson, Bridlington Quay.

GAME.—Cock and two Hens.—First, Samuel Beilby, Beverley. Second, John Graham, Burton Agnes. Cock.—Samuel Beilby, Beverley. Three Chicken.—John Graham, Burton Agnes.

GOLDEN PHEASANT.—Cock and two Hens.—First, John Taylor, sen., Burton Agnes. Second, Thomas Simpson, Hull. Three Chicken.—John Taylor, Burton Agnes.

SILVER PHEASANT.—Cock and two Hens.—Edward Tindall, Bridlington. Second, Edward Tindall, Bridlington. Cock.—G. S. Slater, Beverley. Three Chicken.—P. W. Barnard, Bigby.

GOLDEN-PENCIL OR SPANGLED HAMBURGH.—Cock and two Hens.—No entry. Cock.—No entry. Three Chicken.—Edward Tindall.

SILVER-PENCIL OR SPANGLED HAMBURGH.—Cock and two Hens.—No entry. Cock.—Jameson Denton, Bridlington. Three Chicken.—P. W. Barnard, Bigby.

GOLDEN-LACED OR SPANGLED BANTAMS.—Cock and two Hens.—First, Marshall Wilkinson, Bessingby. Second, W. Nicholson, Brigg. Cock.—Oscar Wilkinson, Bessingby. Three Chicken.—Miss Coverley, Bridlington.

ANY VARIETY NOT PREVIOUSLY CLASSED.—Cock and two Hens.—First, Miss Clark, Hunmanby. (White Bantam.) Second, H. Brown, Malton. (Black Poland.) Cock.—E. Tindall, Bridlington. (Golden Pheasant.) Three Chicken.—Mrs. Wilkinson. (Siberian Ptarmigan.)

GUINEA FOWLS.—Pair.—First, John Burdass, Thwing. Second, Mrs. Sawden.

GESE.—Gander and Goose.—First, Thos. Crompton, Bridlington. Second, George Simpson, Hunmanby. Three Geese.—J. Smith, Marton Lodge.

DUCKS (Aylesbury).—Drake and two Ducks.—Miss Taylor, Sewerby Cottage. Second, Miss Taylor, Sewerby Cottage. Couple hatched in 1855.—Miss Taylor, Sewerby Cottage.

DRAKE AND TWO DUCKS, ROUEN OR ANY OTHER BREED, NOT AYLESBURY.—First, George Simpson, Hunmanby. Second, R. Goulden, Bridlington. Couple hatched in 1855.—Mrs. Simpson, Marton.

TURKEYS.—Turkey Cock and two Hens.—First, Mrs. Conyers, Driffield. Second, W. Hutchinson, Hunmanby. Pair hatched in 1855.—Mrs. Jarratt, Harpham.

PIGEONS.

Pair of **TUMBLERS.**—Prize, J. Bower, jun., Barmston.

Pair of **TRUMPETERS.**—Prize, S. Beilby, Beverley.

Pair of **FANTAILS.**—Prize, S. Beilby, Beverley.

Pair of **CROPPERS.**—Prize, Mrs. Conyers, Driffield.

Pair of **JACOBINS.**—Prize, D. A. Wright, Wold Newton.

Pair of **CARRIERS.**—Prize, J. Bower, jun., Barmston.

Pair of **ANY OTHER VARIETY.**—Prize, Mrs. Conyers, Driffield.

RABBITS.—Pair of any breed.—First, W. Charter, Bridlington Quay. Second, W. Charter, Bridlington Quay.

CANARIES.—Best collection of not less than six.—First, James Appleby, Scarborough. Second, John Eggleston, Bridlington. Pair of Canaries.—First, James Appleby, Scarborough. Second, James Frank, Scarborough.

THE PROTEST AT THE LATE ANERLEY POULTRY SHOW.

CAN you, or any of your readers, inform me whether the Anerley Committee have taken any notice of the protest formally entered against Mr. Davies's Dorking chicken? If they have, what is the result? If not, I should much like to know "the reason why."

Mr. Lewry publicly stated, at Anerley, that he and two or three witnesses were ready to state, on oath, that the cockerel and pullet (?) in the pen that took the first prize, were not hatched this year, and that the cockerel dated his appearance into the world as far back as the 2nd of September, 1854.

Under these circumstances, I think you will agree with me, that true, or not, this matter should not be passed over, as it can be neither agreeable to Mr. Davies, or satisfactory to exhibitors in general to do so.—FAIRPLAY.

(We heard that the Rev. Mr. Boys entered such a protest, but we have not heard with what result.—ED.)

BRIDGNORTH POULTRY SHOW.

It will be seen by an advertisement that this Show takes place on the 4th of October. It has the novel feature of being confined exclusively to the chicken of each variety of the Domestic Fowl, but the Turkeys and Geese may be of any age.

There must be a male and two females in each pen, and for each the *First Prize* is £1 10s., and the *Second Prize* 10s. The classes are as follows:—

Cochin-China (Buff and Cinnamon), (Grouse, Partridge or Dark) (White), and (Black).

Dorkings.—How can the Coloured be compared with the White?

Game.—No separation of varieties.

Hamburghs (Golden-pencilled) (Golden-spangled) (Silver-pencilled) (Silver-spangled).

Polands (Black with White Crests) (Golden-spangled) (Silver-spangled).

Spanish.

Bantams.—No separation of varieties.

Any other variety.

Turkeys. Geese.

Ducks (White Aylesbury) (Rouen) (Any other variety).

Entries close Sept. 25th.

LONDON MARKETS.—SEPTEMBER 24TH.

COVENT GARDEN.

WE are now right into the fruit season, and to enumerate all the varieties which are met with in the market would be next to impossible. The supply of *Williams' Bon Chrétien* continues unabated, and almost every costermonger's truck in the street is groaning under the loads of this delicious *Pear*. *Hessels* are also very abundant, and come in as a good succession to *Williams'*. This is a very profitable variety; and last year, when there were scarcely any autumn *Pears* to be had, several of the London gardeners had a good crop of this variety. *Peaches* and *Nectarines* continue abundant; indeed, a perfect glut. *Grapes* are also very plentiful, and *Plums* of all kinds, including *Damsons*. *Vegetables* continue a good supply, and *Flowers* of all kinds are also abundant.

FRUIT.

Apples, kitchen, per bushel.....	1s. 6d. to 2s. 6d.
" dessert	4s. 6s.
Pears	4s. 8s.
Apricots, per doz....	1s. 6d. 3s.
Peaches, per doz.....	1s. 3s.
Nectarines, per doz....	1s. 3s.
Cherries, per lb.	—
Plums, per sieve	4s. 8s.
Pine-apples, per lb....	6s. 8s.
Grapes, per lb.	1s. 6d. 6s.
Melons, each	2s. 6s.
Figs	—
Gooseberries, per qt.	—
Currants	—
Raspberries	—
Strawberries, per pottle	—
Oranges, per 100	4s. 10s.
Lemons	6s. 8s.
Almonds, per lb.	2s. —
Nuts, Filberts, per 100 lbs.	50s. 60s.
" Cobs, ditto ..	60s. 70s.
" Barcelona, per bushel.....	20s. 22s.
Nuts, Brazil, per bushel.....	12s. 14s.
Walnuts, per 1000 ..	9s. 12s.
Chestnuts	—

VEGETABLES.

Cabbages, per doz. ..	9d. to 1s.
" Red, per doz.	2s. 4s.
Cauliflowers, per doz.	2s. 4s.
Broccoli	1s. 2s.
Savoy	—
Greens, per dozen bunches.....	2s. 3s.
Spinach, per sieve....	1s. 2s.
Beans	—
French Beans, per half sieve	1s. 6d. 2s. 6d.

Scarlet Runners ..	1s. 6d. 3s.
Peas, per bushel	2s. 3s.
Carrots, per bunch ..	4d. 6d.
Parsnips	—
Beet, per doz.	1s. 1s. 6d.
Potatoes, per cwt. ..	3s. 6s.
Turnips, per bunch ..	2d. 6d.
Onions, young, per bunch	1d. 2d.
Leeks, per bunch	2d. 3d.
Garlic, per lb.	6d. 8d.
Shallots, per lb.	4d. 6d.
Horseradish, per bundle	1s. 6d. 2s. 6d.
Lettuce, Cos, per score	6d. 1s.
" Cabbage.....	6d. 8d.
Endive, per score....	1s. 1s. 6d.
Celery, per bunch....	8d. 1s.
Radishes, Turnip, per dozen bunches	1s. 1s. 6d.
Water Cresses, per dozen bunches	6d. 9d.
Small Salad, per punnet.....	2d. 3d.
Artichokes, each	3d. —
Asparagus, per bundle	1s. 6d. 4s.
Sea-kale, per punnet	—
Rhubarb, per bundle	2d. 6d.
Cucumbers, each	3d. 8d.
Vegetable Marrow, per dozen	6d. 1s.
Tomatoes, per punnet	1s. 2s. 6d.
Mushrooms, per pottle	8d. 1s.

HERBS.

Basil, per bunch	6d. to 9d.
Marjoram, per bunch	6d. 9d.
Fennel, per bunch ..	2d. 3d.
Savory, per bunch ..	2d. 3d.
Thyme, per bunch ..	2d. 3d.
Parsley, per bunch ..	2d. 3d.
Mint, per bunch	4d. 6d.

GRAIN AND SEED.

Friday, Sept. 21.—There was a very limited supply of Wheat and other Grain this morning. The demand has not been large, and prices are about the same as on Monday. Barley held for more money. Oats meet an inquiry at 6d. to 1s. advance. Beans and Peas are fully as dear.

WHEAT.	
Kent and Essex, red,	
per qr.....	74s. to 84s.
Ditto, white	84s. „ 90s.
Norfolk and Suffolk..	76s. „ 78s.
Dantzic	86s. „ 92s.
Rostock	81s. „ 90s.
Odesa	73s. „ 76s.
American	83s. „ 85s.

BARLEY.	
Malting	35s. to 38s.
Grinding and Distil-	
ling	31s. „ 33s.
Chevalier	33s. „ 35s.

OATS.	
Scotch, feed	31s. to 32s.
English	25s. „ 26s.
Irish	24s. „ 26s.
Dutch Broo	27s. „ 29s.
Danish	25s. „ 29s.
Russian	26s. „ 29s.

BEANS.	
Harrow	41s. to 43s.
Pigeon	42s. „ 48s.
Tick.....	40s. „ 42s.

PEAS.	
Boiling, per qr.....	42s. to 47s.
Common.....	36s. „ 38s.
Grey.....	37s. „ 40s.
Maple	40s. „ 42s.

SEEDS.	
Turnip, White, per	
bushel.....	—
Swede	—
Rape	84s. „ 86s.
Linseed, sowing, qr..	80s. „ 83s.
„ crushing ..	70s. „ 73s.
Clover, English, redcwt	60s. „ 68s.
„ Foreign do.	52s. „ 57s.
„ White	68s. „ 73s.
Trefoil.....	28s. „ 32s.
Rye, per qr.....	40s. „ 43s.
Tares	88s.
Canary.....	58s. „ 62s.
Hemp	50s. „ 53s.

Linseed Cake, per	
ton.....	£11 to £12 10s.
Rape Cake ..	£6 10s. „ £6 15s.
Indian Corn	47s. „ 50s.

HOPS.

There has been a good trade doing the last few days, and as the supply is now large, merchants purchase freely where the samples are good. At Worcester fair, about 2,000 Pockets were pitched, and about half were sold at a currency from 80s. to 90s.; quality generally fine. Our market is tolerably active at the annexed quotations.

Sussex Pockets, £3 18s. to £4; Weald of Kents, £4 to £4 10s.
Duty, £300,000.

HAY AND STRAW.

Clover, 1st cut per		Meadow Hay, new	95s. to 120s.
load	110s. to 147s.	Rowan	—
Clover, new	120s. „ 135s.	Straw, flail.....	30s. „ 36s.
Ditto, 2nd cut	90s. „ 140s.	Ditto, machine	28s. „ 30s.
Meadow Hay	90s. „ 135s.		

MEAT.

Beef, inferior, per		Mutton, prime	4s. 6d. to 4s. 10d.
8lbs.....	3s. 4d. to 3s. 8d.	Veal	3s. 10d. to 4s. 10d.
Do. middling.....	3s. 10d. to 4s.	Lamb	5s. 4d. to 5s. 10d.
Do. prime	4s. 2d. to 4s. 4d.	Pork, large.....	3s. 8d. to 4s.
Mutton, inferior	3s. 4d. to 3s. 8d.	Ditto, small	4s. to 4s. 6d.
Do. middling ..	3s. 10d. to 4s. 4d.		

POULTRY.

The poultry market during the week has been dull, and the supplies not large. Grouse come very badly, and in small quantities. Partridges are plentiful.

Large Fowls.....	5s. to 6s. each.	Partridges	1. 3d. to 1s. 9d. each.
Smaller do. 3s. 6d. to 4s. 6d.	„	Grouse	3s. to 3s. 6d. & 4s. „
Chickens .. 2s. 3d. to 2s. 9d.	„	Leverets.....	3s. „
Geese	6s. to 7s. 6d.	Rabbits ..	1s. 3d. to 1s. 4d. „
Ducks	2s. 6d. to 3s. „	Wild do. .	10d. to 1s. 2d. „

PROVISIONS.

BUTTER.—Cwt.		CHEESE.—Cwt.	
Dorset, fine	104s. to 108s.	Cheshire, fine	74s. to 90s.
Do. middling.....	90s. „ 96s.	Gloucestershire, dble.	70s. „ 76s.
Fresh, per doz. lbs.	12s. „ 13s.	Ditto, single	60s. „ 74s.
Friesland	98s. „ 100s.	Somerset.....	70s. „ 76s.
Kiel	94s. „ 98s.	Wilts, loaf.....	63s. „ 78s.
Carlow	98s. „ 102s.	Ditto, double.....	72s. „ 78s.
Waterford	98s. „ 102s.	Ditto, thin	54s. „ 64s.
Cork	98s. „ 102s.	Ditto, pines	72s. „ —
Limerick.....	92s. „ 96s.	Berkeley, thin	62s. „ 66s.
Sligo	—		

BACON.—Cwt.		HAMS.—Cwt.	
Wiltshire, dried ..	80s. to 84s.	York, new	80s. to 90s.
Waterford	74s. „ 76s.	Westmoreland	76s. „ 86s.
		Irish.....	74s. „ 84s.

WOOL.

Down Tegs	1s. 2s. to 1s. 3d.	Kent fleeces ..	1s. 1d. „ 1s. 2d.
Ditto Tegs and		Leicester fleeces....	1s. „ 1s. 1½d.
Ewes	1s. 1d. to 1s. 2d.	Long, heavy do.....	1½d. to 1s.
Half-bred Hog-		Combing skins ..	10½d. to 1s. 1d.
gets	1s. 3d. to 1s. 3½d.	Flannel wool ..	1s. 1d. to 1s. 2½d.
Do. Wethers	1s. to 1s. 2d.	Blanket wool	6d. to 1½d.

TO CORRESPONDENTS.

PEARS (W. X. W.).—The Pears you sent are all unknown. In all probability the whole of them are wildings. You do not say in what part of the country you are located, but you cannot do wrong in grafting them with *Jargonelle*, *Beurre de Capiaumont*, *Louise Bonne of Jersey*, *Monarch*, and *Thompson's*.

KIDNEY-BEANS (T. M. W.).—Both the varieties of Kidney-beans are known in this country as the *White Dutch Runners*, and hence it is you have had No. 2 sent you instead of No. 1; but No. 1 is also called the *Knife-case Runner*, to distinguish it from No. 2. To make sure, however, another year, we would advise you to save all the seed you can of No. 1, lest you should be disappointed again next year.

PRICE OF LAND (A Constant Reader).—The price of land in the neighbourhood of Strood and Meopham, as in any other place, will depend on the quantity you require. We have known land sold in the latter parish as high as £100 per acre, for farming land; but if you want only a small portion, you will, of course, have to pay a higher rate.

DESTROYING ANTS (A Subscriber).—Put a shovelfull of Gas Lime over their nest at night.

GLASS FOR GREENHOUSE VINERY (A Reader).—Hartley's Rough Plate is as suitable for the Vine as for the plants.

TOBACCO DRYING (W. Gardiner).—We cannot reprint the directions.

GREY RABBITS (Rabbit).—We know a gentleman who has a buck and doe ten weeks old, which he is willing to sell at two shillings each, and one shilling for the basket.

CALENDAR FOR OCTOBER.

ORCHID HOUSE.

AIR; in fine warm weather, a small opening to allow fresh air to enter the house will be useful, both for the keeping down the temperature of the house, and changing the air. BLETIAS should be put to rest by withholding water and placing them in a pit or cooler house. CYCNOCHES, *Cyrtopodiums*, and *Catesetums*. These plants should now be kept dry a few days in the warm house, and when perfectly so remove them into a cooler one. FIRE may be applied to heat the hot-water every night, more or less, according to the state of the temperature out-of-doors; raise the thermometer by day to 70°, by night let it fall to 60°. INSECTS, look diligently after; every one destroyed now will prevent a host from coming into life in the spring. LYCASTES, and other similar plants should go to rest; place them on a shelf where they may be protected from ever receiving any water. PLANTS that require to be placed in a place to rest may be known, first, by the full, plump, mature pseudobulbs, and, secondly, by the leaves turning yellow and dropping off. When in such a state, it is absolutely necessary to reduce the water and heat to prevent them from growing again prematurely. PLANTS that are growing should have their due share of water, and be kept moderately warm, some may require potting, and all will be the better for a top-dressing with fresh compost. STANHOPEAS will now be at rest; give no water till the spring. This month is a suitable season for providing materials for growing Orchids, such as fibrous peat, turfy loam, sphagnum or bog moss, branches of trees, and broken crocks; all these, duly prepared, and kept dry and warm, will be ready for use whenever they are wanted during the wet season.

T. APPELBY.

PLANT STOVE.

ÆSCHYNANTHUS, reduce water to; prune in straggling branches. AIR, give every favourable day. ACHIMENES, place in a cooler house, to cause them to give over growing and go to rest; give no water, and put them in a spot where no water or dry heat will reach them; this rule does not apply to *A. picta*, which should now be in flower, and in its greatest beauty. AMARYLLIS AULICA will now be showing flowers; remove it, as soon as the flower-buds are visible, from the tan-pit into the stove; all other species of stove *Amaryllis* should now be at rest. CONOCLINIUM IANTHEMUM, or, as it is now called, *Hebeclinium ianthemum*, a winter-flowering, elegant stove plant, repot, and grow on to flower in February or March. ERANTHEMUM PULCHELLUM, and *E. strictum*, treat similarly. ERANTHEMUMS, water with liquid-manure, to induce them to open their flowers freely. GESNERAS should all be at rest, excepting *G. zebrina*, which will now be one of the chiefest ornaments of the stove. JUSTICIA; several species will now be in flower; water them freely, occasionally using liquid-manure. LUCULIA GRATISSIMA, though not essentially a stove plant, will flower much finer early in the season if brought into the stove this month. MEDINILLAS, young plants repot; older plants keep partly dry and cool. PASSION FLOWERS, trim in freely. POINSETTIAS water freely, to produce fine head of bloom in winter. ROGIERA AMENA, and CORDIFLORA, repot; place in heat, to bloom about Christmas; a new genus of dwarf, free, winter-flowering, stove-shrubs. REMOVE stove-plants kept in frames through the summer into the stove; water freely, to compensate for the loss of the moist atmosphere of the pit. WATER, apply very moderately to the general stock. Remove all decaying leaves, and top-dress generally.

GREENHOUSE.

AIR admit freely during the day, but sparingly at night, unless the thermometer out-of-doors be about 40°. ALSTREMERIAS, shift, or rather pot in rich light soil, and place where they will be secure from frost. They thrive beautifully when planted out in a pit or border, where they can be covered with glass in winter. AZALEAS, remove into the house, especially those that bloomed early, as the least frost will discolour their leaves. BULBS, pot for early blooming. CINERARIAS, forward ones give manure-water, and have secured under glass. Very little frost injures them. CAMELLIAS (See AZALEAS). CALCEOLARIAS, strike cuttings; pot forward plants; prick off seedlings. CHRYSANTHEMUMS for winter blooming, provide with shelter from cold rains and early frosts, and water with manure-water alternately with clean. CLIMBERS on rafters now prune in, to give light to the plants beneath. CLERODENDRONS, GESNERAS, LANTANAS, ACHIMENES, &c., keep in the warmest end of the house preparatory to resting them for the winter, or returning to the plant stove. AZALEAS, CAMELLIAS, FUCHSIAS, &c., at the

coolest. Cuttings of all kinds, especially late inserted ones, intended for out-door work next season, keep secure from dampness. Very dull, cold weather will be their greatest enemy. Be careful how you apply any artificial heat—it generally does more harm than good. *CYTISUS* and *GENISTA*, scourge well with soap-suds, and then with clean water, to remove all traces of Red-spider, and then place where they can be sheltered before being housed at the end of the month. *ERYTHRINAS*, out-of-doors, when touched with frost, take up and pot, and placed under shelter, not cutting the stems until moderately ripe. *GERANIUMS*, keep clear from fly, and slowly growing; this last condition is the best antidote against the former; avoid, however, letting them be cold and soaked too, for then you will have spot; forward ones may be repotted, and fresh struck ones potted off. *GLADIOLUS*, pot. *HEATHS* and *EPACRIS*, get under shelter, and give them abundance of air, when temperature about 40°. All hard-wooded plants will require similar treatment, only the hardiest may have the airiest and coolest place. *EARLY FUCHSIAS* may be put into sheds before their stems have been injured by frost; pot all young struck plants. *Geraniums*, *Calceolarius*, &c., for beds and vases, may be kept easier in boxes than in pots—say 5 inches deep, 6 inches wide, and 2½ feet in length; give them two or three inches each. *SALVIA SPLENDENS*, encourage with manure-waterings, and syringing with soot water to banish the Red-spider before housing it in the conservatory. Plants to be raised from the flower-beds should previously have their roots cut round, and then, after potting, should have a little bottom-heat, to encourage fresh roots, while the top temperature is kept cool. They will not require to be often watered for a time, but syringing the tops in sunny days will be serviceable. ALL PLANTS should be thoroughly CLEANED, and houses and glass washed and put in good order. WATER should also now be given with a careful hand, and only when necessary. A plant may not require it above once or twice a-week now that would have wanted refreshing twice in the dog-days, during a forenoon's sunshine. Those swelling their flower-buds will require, however, a good supply. Bear in mind that bad watering is the great cause why pot plants so often languish and die.

R. FISH.

FRUIT-FORCING.

AIR-MOISTURE, gradually decrease. BOTTOM-HEAT must decline with the light, until they reach about 75° in December. CUCUMBERS, thin out carefully; stop regularly; and give liquid manure. CHERRIES, in tubs or boxes, plunge in a cold and shaded situation. FIGS, see that the wood is well-ripened; those in pots plunge and secure from frost. FIGS, be moderate with; rather inclose sun-heat. FLUES, clean and repair. GRAPES, late, fire and ventilate freely; watch for decaying berries. GLASS, wash all that is in any way dirty. MELONS, sustain a bottom-heat of near 80°; keep down red spider, and ventilate freely in the morning. NECTARINES and PEACHES, apply liquid-manure to late houses after heavy crops; keep away red spider; stop all growing shoots, and secure the ripening of the wood. PINES, sustain heat, in order to ventilate most freely those to winter in pits. Apply liquid-manure to swelling fruits, and sustain a bottom-heat of 80°; atmospheric from 65° to 85°. PRUNE Vines, Peaches, &c., for very early work. WATERING, decrease at the root in proportion to the decline of the season.

R. ERRINGTON.

FLOWER-GARDEN.

ALSTROMERIAS, Van Hout's varieties, and others, plant six inches deep, and in frosty weather cover with leaves. ANEMONES, plant for earliest bloom. Sow a few of the hardiest ANNUALS before the end of the first week. AURICULAS and POLYANTHUSES, put under shelter. BEDDING GERANIUMS, save as many as you can store; cut them close, and plant them in cold pits; or dry, and keep in the upper rooms of the house. BULBOUS ROOTS, finish planting in dry weather; pot for latest forcing, and for plunging in flower-beds, &c. CARNATION layers, finish planting and potting; secure the pot ones from rains. CLIMBERS of all sorts, plant, prune, and train. COMPOST, prepare, and turn in dry weather. DAHLIAS, cut down after frost, and let the roots remain as long as it is safe; when taken up, dry them in open sheds, &c., before storing where frost and damp cannot reach them. DRESS the beds and borders, and put mark-sticks to bulbs and other roots, to guide you when digging. EDGING, plant. EVERGREENS, finish planting, b. FIBROUS-ROOTED PLANTS, finish dividing and planting, b. FORT over borders, &c. GRASS, cut very close the last time; keep clear of leaves; and roll. GRAVEL, weed and roll. HEDGES, plant, clip, and clear at bottom. HOE and rake shrubberies, and bury the leaves, &c., between the plants. IRIDS, as *Iris*, *Gladioli*, &c., plant, and shelter from frost. LAYERING, perform generally. LEAVES, gather for compost, &c. MARVEL OF PERU, take up and store like Dahlias. MULCH round trees and shrubs lately planted. PLANT perennials and biennials. PLANTING, perform generally. POTTED PLANTS, for forcing, plunge in the earth of a well-sheltered border, facing the sun. PRUNE shrubs and trees generally. RANUNCULUSES, plant for earliest bloom; seedlings of them, in boxes, &c., remove to a warm situation. ROSE-BUDS, untie the matting, if not already done, from newly-budded, and cut the shoots to within six inches of the buds. SHRUBS of all kinds, plant, stake, and mulch. SUCKERS, from Roses and other shrubs, separate and plant. TIGRIDIAS, save from frost as long as possible; should not be dried till January or February. TULIPS, finish planting, b.

D. BEATON.

FLORISTS' FLOWERS.

ANEMONES, plant early in the month. AURICULAS and POLYANTHUSES, place in their winter quarters, m.; give no more water than just sufficient to keep them from flagging. CALCEOLARIAS, place close to the glass; prick off seedlings. CHRYSANTHUMUMS, give abundance of water to and plenty of air; kill insects on by frequent smoking. CARNATIONS and PICOTEES, finish potting-off into 48-pots, and place under shelter. CINERARIAS, keep in frames well protected from frost till next month excepting early flowerers, which should, as soon as bloom is perceived, be removed into the greenhouse; seedlings pot off. DAHLIAS,

protect from frost; if already caught by it cut down, and lift the roots, to prevent excessive bleeding: protect plants cut down from frost, by covering with a layer of coal-ashes. FUCHSIAS, gradually dry off, and place under the stages, or in sheds, where the frost will not reach them. GLADIOLI, plant b. in light rich soil. HYACINTHS, choice, plant b. in a deep, rich, sandy soil, in a sheltered nook. Common sorts plant anywhere in beds and borders. Pot HYACINTHS in mild compost, and deep pots; press the soil firm to prevent the roots descending too quickly to the bottom of the pots. IRISES, English and Spanish, plant b. in rich soil. PANSIES, pot off cuttings, very choice kinds place under glass in cold-frames; plant out common kinds, b.; prick out seedlings; old, straggling plants destroy, or prune in severely. PINKS, plant out finally where they are to bloom. RANUNCULUSES, examine and remove all decaying or mouldy tubers; prepare beds for; Turban varieties, plant b. TULIP-BEDS, level, and make ready to receive the bulbs early next month. WEEDS, pluck up in every department of the florists' garden.

T. APPLEBY.

ORCHARD.

APPLES, house in succession. BERBERRIES, gather, m. BORDERS, prepare b.; composts, collect. CURRANTS, prune, c. DAMSONS, gather. FRUIT-TREES, remove, e. FRUIT-ROOM, carefully ventilate. FIGS, pluck off late fruit, e. GOOSEBERRIES, prune, e. GRAPES, bag, or otherwise protect. MULBERRIES, gather. MEDLARS, gather. PEARS, gather in succession all at the end. PLANTING, prepare for, and proceed with at e. PRUNING, commence as soon as the leaves are cast. RASPBERRIES, protect late-bearing. RETARDING: look well to Currants and other retarded fruits; keep away mouldiness. ROOT-PRUNE, b. STRAWBERRIES, dress away runners, but not the leaves, b. TOMATOES, gather, and ripen on heat, b. VINES, attend well to, b. WOOD ripening: do all you can to secure this, b.

R. ERRINGTON.

KITCHEN-GARDEN.

THIS is the season to look out for plenty of plants of all kinds that are likely to be required for the ensuing spring; if you run short of any particular kinds, be active in looking round among your neighbours and friends, to see what you can exchange with them, as one may have an abundance of Lettuces, another an abundance of Cauliflowers, and so on. This is the way we should help one another. The next thing is to arrange good and proper situations for winter protection. Frames that are done with from the Cucumber or Melon crops may be removed from the old hotbeds, and set down on the ground, level or upon sloping banks; and if the frame be a deep one, the bottom may be filled with any kind of material to within nine inches of the top of the frame, then upon that six inches of good earth; this brings the crop up within two or three inches of the glass. The same may be done with merely four boards nailed together, and so placed upon a sloping bank, filling in the same way, so as to keep the picked-out crops up to the glass. These are contrivances for picking out Cauliflowers, or Lettuces, Cabbage-plants of any kind, and make excellent make-shift shelters.

ANGELICA, keep clear of weeds. ARTICHOKEs, attend to winter dressing. ASPARAGUS-BEDS, attend to winter-dressing; seeds collect, and plant for forcing. BALM, plant. BEET, take up for storing. BORECOLES, towards the end of the month may be lifted into quarters of less value, should the ground be likely to be wanted for other purposes, for early spring crops. BROCOLIS, keep clear of weeds, and attend to those heading it, to protect from frost, &c. BURNET, plant. CABBAGES, plants out, prick out, and earth-stir among. CARDOONS, earth up. CARROTS, take up main crops for winter store, and attend to young growing crops, as thinning, keeping clear of weeds and fallen leaves, &c. CAULIFLOWERS, plant out under hand-glasses about the middle of the month; also in frames for winter protection. CEBLEY, plant and earth up. CHIVES, plant. COLEWORTS, plant. CRESS (Water), plant. CUCUMBERS, plant out; keep up heat of beds, by linings, &c.; water sparingly. DILL, plant. DUNG, prepare for hotbeds. EARTHING-UP and earth-stirring, attend to. ENDIVE, plant, and attend to blanching; full-grown may be taken up and planted at the foot of walls, and other warm corners, towards the end of the month, for winter protection. FENNEL, plant. HERBARY, dress. HORSE-RADISH, take up and plant. HYSSOP, plant. JERUSALEM ARTICHOKEs, take up as wanted. LEAVES fallen, remove frequently. LEEKS, earth-stir among. LETTUCES, plant and prick out under walls, or in frames, &c. MELONS (late), keep up heat, by linings or otherwise; no water must be given. MUSHROOM BEDS, make, and attend to those in bearing, &c. NASTURTIUMS, gather for seed, if not done before. ONIONS, attend to those in store, and earth-stir or thin out the autumn-sown, or plant out if required, about the beginning of the month. PARSLEY, attend to potting, for use in winter. PARSNIPS, take up towards the end of the month for winter storing; leave in the ground for seed. PEAS are sown by some about the end of the month. PENNYROYAL, plant. POTATOES, attend to; look over often to see that no decayed ones remain among the bulk. RADISHES may be sown in warm border. RHUBARB, plant in pots for early forcing, end of the month. SALSIFY, take up for winter storing. SAVOYS, plant out. SCORONERA, take up for winter storing. SEEDS, gather of any kinds as they ripen. SMALL SALADING sow as wanted. SPINACH, keep clear of weeds; thin out, and attend to in dry weather. TANSY, TARRAGON, and THYME, plant, if required. TOMATOES, gather; if not quite ripe, place them in some warm, dry situation, where they will soon ripen off. TURNIPS, clear of weeds, and thin out young crops. VACANT GROUNDS rough up, or ridge, or trench. Those who prick-out plants in frames should be regular and mindful to take off the glass lights entirely in all favourable weather, and to tilt back and front in open, wet weather.

T. WEAVER.

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